



EDUCATIONAL SUPPLEMENT
Priory House, St John's Lane, London EC1M 4BX. Tel 01-253 3000

Still standing to the Right

This week, *The TES* has added its own contribution to the harvest of public opinion polls which have been gathered in since the election was announced. We commissioned a poll of teacher opinion, carried out by National Opinion Polls, aimed at discovering voting intention and views on a small range of major issues. It has to be stressed that the pollsters cannot make predictions. All they can do is present a snapshot of opinion and intention which faithfully reflects state of mind at the time the questions were asked.

Such caveats are important. There are obvious limits to the weight which can be placed on an exercise such as this, involving a sample of 559 teachers. But teachers' unions and others (even educational newspapers) are quite content to generalize about teacher opinion with no evidence to support their theses: when we do have a survey of this kind it is worth looking closely at the results.

The evidence on teachers' voting intentions places the Conservatives comfortably ahead with 44 per cent, followed by the SDP/Liberal Alliance with 28 per cent. This is, in the main, consistent with information from previous surveys. The Conservatives were even further ahead in 1979.

Perhaps the success of the Alliance among teachers should not come as a surprise – in previous elections the Liberals seem to have scored much better among teachers than among voters in general, and there have been a number of signs of rapport between educationists and the SDP since its launching. It looks this time as if Labour's vote among male secondary staff has fallen away, with the Alliance as the main beneficiary, and this has taken the Alliance's lead in teachers' voting preferences. The poll was taken in Scotland, where the Alliance edge ahead overall, in contrast with the dominant Labour trend amongst Scottish voters as a whole.

All this, of course, is a proper corrective to any lingering suspicion in the public mind that the schools are staffed with dangerous radicals. When the first *TES* election poll in 1974 showed the predominance of Conservative voting intentions it came as a surprise to many – particularly Conservative – observers who had found it convenient to nourish their own illusions about teachers' politics, fostered by the NUT, whose executive is always solidly Labour. It is no bad thing occasionally to be reminded that the real



The Alliance... rated second in popularity with teachers.

political centre of the teaching profession is formed by "wet" Conservatives and members of the Alliance.

There is some interesting evidence about floating voters to be gleaned from the answers which respondents give to questions about their past voting record. Some 89 per cent of those who vote Conservative intended to vote Conservative again. Eleven per cent, however, thought they would switch to the Alliance. Only 73 per cent of Labour's 1979 voters in our sample said they would stay with Labour, 21 per cent switching to the Alliance. It looks as if fickleness extends to the Liberals, too: only 75 per cent of them remain constant; 12 per cent now threaten to vote Conservative and 10 per cent, Labour.

Altogether, the poll suggests there is still time for opinion to change in response to the election campaign. The voting intention figures are arrived at after the 'don't know' have been pressed to state a preference, even if they have not made up their minds. If you leave them in the uncommitted category, about 1 in 5 teachers still has to make a voting choice and the Alliance may well pick up more of these if Labour appears to falter, or Labour could surge ahead if the Alliance goes down the aisle.

Psychological conclusions aside, the other main interest in the poll lies in the order in which teachers listed the main educational issues, and

their agree/disagree responses to the statements put to them by the interviewers.

The educational issue ranked first by most respondents – pre-school provision – came as a surprise: not because it is not of obvious importance, but because it has not been in the forefront of discussion lately. It is noteworthy that both Labour and the SDP have made the pre-school sector top priority and teacher opinion clearly supports this. It is one of the ironies of polls such as this that the Conservative Party which the majority of teachers also support does not give pre-school policy so much as a mention in its manifesto.

Level-pegging as the next two issues in order of importance that teachers chose from our list are two subjects which have been well in the mainstream of educational and political debate: examination reform and vocational education. Rating issues in order does not necessarily give much clue as to views on the issues concerned, though it is worth noting that vocational education was rated an important subject especially by Conservative supporters and secondary school teachers, while declared Alliance supporters (especially secondary teachers again) were most concerned about exam reform.

There is, however, more evidence on vocational courses elsewhere in the poll, with an impressive majority supporting their inclusion as an option in the curriculum after 14, and a significant three-quarters opting for a compulsory vocational element for everyone at that age, which suggests widespread agreement that a strictly academic diet is no longer enough.

Low down on nearly everybody's lists of issues came those items which the parties' policy makers might have expected to be the most popular vote-catchers: independent schools, grants for 16 to 18-year-olds, loans and vouchers (though admittedly the last two didn't quite make it to the Tory manifesto).

This probably had a lot to do with the fact that this was a poll of professionals; it may be indeed that any apparent discrepancies between support for parties and for their educational policies is simply explained by teachers hating their voting intentions on non-educational issues. We did not ask them this time how high they rated education in a list of election issues.

There is one other frustration for journalists in conducting or analysing a poll such as this, in that there is no opportunity for supplementary questions. Many of the agree-disagree state-

ments presented to our sample produced unexpected or interesting results when analysed: there has to be an element of guesswork in interpreting them.

The conservative (with a small 'c') view of the teaching force is still evident in support for corporal punishment and a sorry religious education. But on a publication of HMI reports, three out of four teachers are in favour. Is this lowly along, or were the unions who oppose it out of touch with their members?

On the more obviously contentious issues there are signs of continuing debate. Some impact on opinion. There is strong support for a declared policy of racism in the classroom, but a narrow majority in favour of anti-semitism, which could be because consciousness of the second issue has not yet had time to establish its aims.

On new subjects like political education, peace education there is not unexpected evidence of strong difference of opinion: a narrow majority against peace studies, more definite overall view against education. In this instance, it is helpful further. Although only 37 per cent agree that every school should teach education, against 49 per cent who do not, the result is strongly influenced by the primary teachers (23 per cent for/against). Among teachers in secondary schools where the subject is more likely to be taught, opinion was 52 per cent in favour.

There is also a small, but definite, majority against the proposition that all teachers should be required to teach the subject which must be discouraging to the light of the recent implementation of the 1981 Education Act, with its push for integration. It may be that many of the teachers require qualification, but there is also the implication that more preparation is needed to enhance the spirit of Wamock into the classroom.

And are there signs that more general annual teacher assessment might prove to be a minority in favour of the proposal? There is a minority in favour of the proposal, but the idea is beginning to take hold, and sufficient base for local authority action to build on.

ILEA talks on contracts break down

by Richard Garner

Negotiations on a new contract for Inner London's 21,000 teachers have broken down after just over a year of talks.

The breakdown, caused by the vexed question of lunchtime supervision and teachers' voluntary duties, will almost certainly kill off the possibility of any national negotiations for a new contract.

Representatives of the Inner London Teachers' Association were told by the Inner London Education Authority that they had no point in continuing the discussions when the two sides met last day.

The decision was reached after the Inner London Teachers' Association, which represents 14,600 of the 21,000 teachers, had withdrawn a document had tabled calling for collective agreement to be established to cover lunchtime supervision, which

the ILEA maintained that substantial progress had been made during the talks on other issues – such as guaranteed preparation and marking time and an increase in supply cover.

The ILTA sought a deferment of the negotiations at last Friday's meeting but were told by the authority that "it would be no longer fruitful" to pursue them.

Mr Bernard Regan, Inner London executive member of the NUT, said he was hopeful that progress could be made on individual issues which the teachers would now be taking up with the authority – such as non-teaching time and supply cover – "I was surprised that they didn't want to pursue it a bit more," he added.

The talks started after an earlier round of contract negotiations in CLEA/ist which is responsible for teachers' conditions of service – had ended in deadlock over the question of lunchtime supervision, which



Contracts: NAS/UTW members take to the streets

teachers say it entirely voluntary.

The ILEA proposed that teachers should agree to the concept of "C-time". This would have meant pledging themselves to carry out a certain amount of voluntary supervision every month which could consist of either lunchtime supervision, attending parents' evenings or taking on other voluntary duties.

The ILTA, at that time under the leadership of Mr Bob Richardson, responded by tabling its paper calling for a code of practice on voluntary duties rather than a new and binding contract.

But the National Association of Schoolmasters/Union of Women Teachers, which represents 6,000 Inner London teachers, walked out of the discussions at this stage and decided to boycott all future talks. It organized a half-day stoppage last week in protest over the continuation of the talks but it returned to the

negotiating table to be in at the death last Friday.

The new leadership of the ILTA, which won control after this year's elections, made it clear that it did not see any need to negotiate away anything on voluntary duties to achieve better supply cover or guaranteed non-teaching time – which had been promised in the Labour Party manifesto for London two years ago.

Mr Richard Rieser, general secretary of the ILTA, said this week that its council was planning a ballot of all its members on introducing "no cover" action to restore supply cover in Inner London.

He added that it was asking the union's action committee to support a one-day strike – probably on June 22 – to protest at the authority's redeployment plans. He estimated that 300 secondary teachers and up to 150 primary teachers faced redeployment.

'Publish cuts document' – Kinnock

Mr Neil Kinnock, Labour's education spokesman, this week called on Sir Keith Joseph, the Education Secretary, to publish the latest HMI report on the effect of cuts on schools and colleges, *Biddy Passmore* writes.

He should publish it now, Mr Kinnock said, "both to respect the customary timetable and in order that the people of Britain may be given the information to make the balanced judgment that is their right".

The inspector's last two reports on the effects of spending cuts were published in February 1981 and April 1982. Last year's report found that only five out of the 96 English education authorities had a level of provision that HMI regarded as satisfactory on all major counts.

Sir Keith told the Commons last month that the new report would be published when it was complete.

A DES spokesman said this week that it was still not finished but it is understood that, even if it were, it would not now be published before June 9 because of its political implications.

More than 100 Oxford dons have written this week to the country's Conservative-controlled education committee, noting "with disgust the evidence that provision in Oxfordshire schools was perilously low".

It was "particularly shocking that the local authority of a place internationally known for its standards of learning should fail its citizens by running the public education service down", they said. See page 13

Tories and Labour attack rates plan

by Biddy Passmore

Conservative plans to abolish the metropolitan counties and limit rate increases have been sharply criticised by both Labour and Conservative MPs.

Mrs Frances Marrell, Labour leader of the Inner London Education Authority – which is under threat on the proposal to place local curbs on rate increases would lead to "the dissolution of whole sectors of services". She also attacked the plan to place the present authority with a new board of the inner London boroughs. The changes showed that the Government were aiming to destroy the authority by stealth, she said.

And Mr John Horrell, chairman of the Conservative-controlled Association of County Councils, warned that the central government powers to raise rates would damage "the very essence of local government and local democracy" – the right of the local ratepayer to control their local budget and determine local priorities.

The Conservatives' plans to reform the government would affect education in three ways. First, the abolition of the Greater London Council would mean the end of the Inner London Education Authority, which is formed by a special subcommittee of the council. But Sir Keith Joseph, Education Secretary, said this week that the authority's functions would be managed by "a joint board of the various authorities" understood to mean the inner London boroughs.

Second, the Conservative Manifesto promises to "curb excessive and irresponsible rate increases by high-spending councils", which would hit Labour-controlled education authorities such as ILEA, Manchester and Sheffield. ILEA, for instance, is currently spending £352m more than the Government thinks it needs to.

Third, it promises to "provide a general scheme for limitation of rate increases for all local authorities, to be used if necessary". Mrs Josie Farrington, Labour chairman of Lancashire education committee and parliamentary candidate for West Lancashire, is making the Government's plans to penalize rate rises a central plank of her campaign.

She told voters on Monday that, if Lancashire had not been able to raise rates to offset a £45m cut in government grant over the last two years the county would have had to sack staff, and make massive school closures. There would have been a "very drastic deterioration" in services like meals and adult education.

Mr John Horrell, chairman of the Conservative-controlled Association of County Councils, warned that the central government powers to raise rates would damage "the very essence of local government and local democracy" – the right of the local ratepayer to control their local budget and determine local priorities.

The Conservatives' plans to reform the government would affect education in three ways. First, the abolition of the Greater London Council would mean the end of the Inner London Education Authority, which is formed by a special subcommittee of the council. But Sir Keith Joseph, Education Secretary, said this week that the authority's functions would be managed by "a joint board of the various authorities" understood to mean the inner London boroughs.

Concessions likely for Muslims

by Bert Lodge

A hint that Bradford city council may be ready to make an important concession to Muslim parents was given by the education committee chairman to a packed meeting of Muslims last Sunday.

Mr Peter Gillmore admitted to nearly 1,000 Muslims that Bradford had been "somewhat reticent" over the last 20 years in meeting the needs of the whole community. But they would be starting discussions on whether to provide single-sex schooling.

This is the demand made repeatedly over the years to which the council has never yielded. A memorandum issued to schools last year, while making substantial provision for special dress, food and prayer facilities, made no mention of single-sex schools.

Now it looks as though a request earlier this year from the Muslim Parents Association to have five schools re-designated as "Islamic voluntary-aided" has made the council have second thoughts.

A succession of speakers at the meeting at St George's Hall called for more control by Muslims over their children's education.

An information booklet was published last week by Bradford Council explaining to parents what arrangements schools are making for Muslim, Sikh and Hindu children. The booklet is printed in Urdu, Gujarati and Bengali.

It was reported on an article on the front page of *The Times* on Saturday. It said this showed the full significance of the bland statement in the manifesto that the party would "continue to seek ways of widening parental choice and influence over their children's schooling".

But Monday's edition of *Daily News* contained an interesting clarification. Voucher and credit schemes had been described as only "one way of achieving our aims". It stressed, adding: "The Conservative Party is not committed to this, or to any other particular method of increasing parental choice."

An embarrassed spokesman explained the lapse this week by saying that the word "only" had been omitted from the original version through an oversight.

Vouchers ghost reappears

As an embarrassing blip in Tory education policy was quietly smoothed out last weekend.

Vouchers, the ghost absent from the manifesto, suddenly reappeared as an option in last Thursday's edition of *Daily News*, the policy said sent out to Tory candidates.

"We intend in the next Parliament to make schools more responsive to parental choice", it read. "One way of achieving this would be by the introduction of vouchers or credits, whereby every parent with a child of school age would be issued with a voucher or credit equal to the cost of educating the child in a maintained school, which could be used to pay for the child's education at a maintained school of the parent's choice."

The revival of vouchers was duly reported on an article on the front page of *The Times* on Saturday. It said this showed the full significance of the bland statement in the manifesto that the party would "continue to seek ways of widening parental choice and influence over their children's schooling".

Campus cuts based on error

The Government has been accused of making university cuts on the basis of bogus figures.

Miss Diana Warwick, newly appointed secretary of the Association of University Teachers, told the association's summer council meeting that ministers had claimed the money was cut because of a "dramatic drop in numbers". But recent DES figures had shown that the money was cut on for longer than originally forecast because of the "large proportion of middle class students since the mid 1960s".

There was no sign of a broadening of opportunity, she complained, as the projections of the projected changes in unemployment.

COMMENT

A privilege that ought to be used

The two articles on page 24 make a striking contrast. One paints a sad picture of British educational publishing, with even the strongest firms saying they are unable to invest in important new ventures. The other shows the French Government's dynamic efforts to back books and reading, building up public libraries, subsidizing small publishers, publicizing the message that youngsters must be encouraged to read for pleasure.

One should not exaggerate the gloom on this side of the channel. Unlike France, we have a pretty extensive public library service, even though its development has been choked by cuts and inflation. Our educational publishers have every reason to moan about the decline in school book buying, but considering the double-squeeze of dwindling export markets and cuts, several have survived surprisingly well. Next year

looks brighter, according to *The TES* survey (published April 29) capitalism is going up a percentage point or two in most industries.

With published HMI reports, we now have detailed pictures of stocks of library and textbooks in many schools. It is a mixed one. Some schools have good stocks and use them well. Some have adequate stocks of library books which are not well used. And some have disgraceful stocks, and no staff or facilities to make much of the ones they have.

Meanwhile, the picture is complicated by the new demands of information technology and computing. The Government has made sure that every school will soon have one or more computers. But without expensive software and expensive peripherals, they will be of very little use. Computers will make heavy demands on capital expenditure, which will be fine for the educational publishers who have invested in software, but will do nothing for decaying book stocks.

It is easy to argue the economic sense of investing in educational books. Just as it is easy to argue the sense of repairing the rotting window frames and leaking roofs found in

many HMI reports. Britain is good at school book publishing, and business has considerable export potential. Educationally, a school system where even the ablest and most conscientious students have no regular and personal access to essential textbooks makes nonsense at all.

But there is also a need, clearly shown in many HMI reports, for school staffs to work out a policy to promote the use of the books they have. If books are, as the French maintain, "privileged instruments for maintaining the continuity and diffusion of a culture", people must be taught and encouraged to use them.

It is also a need, clearly shown in many HMI reports, for school staffs to work out a policy to promote the use of the books they have. If books are, as the French maintain, "privileged instruments for maintaining the continuity and diffusion of a culture", people must be taught and encouraged to use them.

It is also a need, clearly shown in many HMI reports, for school staffs to work out a policy to promote the use of the books they have. If books are, as the French maintain, "privileged instruments for maintaining the continuity and diffusion of a culture", people must be taught and encouraged to use them.

budgets and the drive for an increasing belt and braces curriculum. Something, no matter how imperfect, is desperately needed to prevent the minority languages being consigned to the scrapheap of history in all but a handful of schools – mostly independent.

The key question now is not so much how languages should be taught and assessed in schools – recently brought to the fore by the publication of draft national criteria for French at 16-plus. Rather, it is whether languages other than French should keep a place on the timetable.

The DES document, the first stage in drawing up a national policy on languages, to be implemented locally, should be seen in this light. Commandeering candid and succinct, it advances a wealth of precious argument for firming up the precarious toeholds that subjects such as German, Spanish, Italian and poor, forgotten Russian now have on the shifting cliff-face of the secondary curriculum.

It also highlights the depressing drop-out rate among pupils studying a modern language. Although nine out of ten 11-year-olds begin a foreign language, almost invariably French, only one in three is still on

the books in the fourth year. Inevitably, the traditional irregular verbs are particularly vulnerable to many. DES recommends courses more closely tailored to linguistic capabilities and needs, the less able to be

Of course, many will be appointed by the documents to sound a clarion call for resources to be devoted to language teaching, other than in the in-service training.

A more realistic approach, one calculated to turn back the clock for an earnest little English teacher to adopt this proposal, is to get on with the job.

...no comment

"The programme will be an opportunity to bring to the attention of the public the importance of the language of the past."

From a Birmingham school, a familiarisation course for the language of the past.

"THE MOST THOROUGH, CLEARLY STRUCTURED, TEACHABLE, ATTRACTIVE MATHS SCHEME I HAVE EVER SEEN"

Ginn Mathematics

The comprehensive new programme for ages 5 to 12 – and for the full ability range

Levels 1 and 2 (for ages 5 and 6) published February 1983
Over 3,000 schools have already asked for an Evaluation Pack. If you are not among these please see the coupon below.
Levels 3 and 4 (ages 7 & 8) September 1983
Levels 5 and 6 (ages 9 & 10) February 1984
Level 7 (ages 11 to 12) September 1984

Published by Ginn and Company Limited, Prebendal House, Person's Fee, Aylesbury, Buckinghamshire, HP20 2QZ. Registered in England No. 642457

Ginn Mathematics Levels 1 and 2 (for ages 5 and 6)

HALF PRICE Evaluation Pack

The Evaluation Pack for Levels 1 and 2 comprises the Teachers' Resource Books and one each of the pupils' materials, all at half price, together with detailed information illustrating all the other materials.
To Ginn and Company Limited, FREEPOST, Aylesbury, Buckinghamshire, HP20 1GR. (No stamp needed if this address is used.)
Please supply one Ginn Mathematics Levels 1 and 2 Evaluation Pack post free on 30 days approval at the special half price of £7.00

Name

School Name and Address

Postcode

Date

7622

ELECTION '83

TES/NOP POLL

Nearly half of all teachers believe that their pay and promotion should be linked to an annual assessment of their performance. Though the poll reveals nearly as much opposition to the idea as support, the fact that such a high proportion would be willing to consider the idea must give the teachers' unions food for thought.

Remarkable, also, is the fact that teachers who favour the proposal are of all types and of all political persuasions (though older teachers tend to be the least happy).

Instead, they strongly favour more vocational education for pupils of all abilities after the age of 14. One of the most surprising results of the poll is the clear message from teachers of every sort, young and old, senior and junior, Tory and Labour, that vocational education should have a new place in the curriculum.

Overall, 68 per cent of teachers agreed that pupils should have the option of a full vocational course at 14, while 78 per cent took a tougher line and supported a compulsory vocational element in the curriculum for all pupils over 14. These figures are slightly inflated by the fact that primary teachers also answered these questions, and were generally even keener on such a reform.

Among secondary teachers 60 per cent agreed with the option at 14 (and 30 per cent disagreed), but 73 per cent favoured a compulsory element (while only 19 per cent disagreed).

The issue has been brought to the front of the political debate by Sir Keith Joseph and the Tories, who have been pushing for vocational education being started in various local authorities this autumn.

Generally, the idea of an optional full vocational course, of the sort to be tried out, has less support than a compulsory element for pupils of all abilities. Indeed among senior secondary teachers (heads of department and above), only half favour the option and 40 per cent are against it.

Perhaps the most significant result is that the idea of a compulsory vocational element for all pupils over 14 attracted so little opposition. Senior secondary teachers were least happy (25 per cent disagreed), but they were on their own. Only 1 in 10 of new teachers were against it (and 8 out of 10 were for it).

Tories turned out to be the most enthusiastic for a compulsory vocational element, while the Alliance were least so. But the difference was minor.

The poll also gives the teachers' verdict on two of the year's more controversial curriculum proposals: that all schools should teach peace studies and political education.

Overall, teachers are almost equally divided on peace studies though those most affected - secondary teachers - are against them. The peace studies debate, split teachers along age and experience lines with 45 per cent of under 35s in favour. Heads and other senior secondary teachers are most opposed (58 per cent disagree).

The stark contrast is between the political parties, not surprisingly perhaps in view of the link in some people's minds between peace studies, unilateralism, and left-wing politics.

More than half of Tories are against peace studies compared with only a quarter of Labour voters. The Alliance supporters agree with the Tories.

As election day approaches what do teachers think about the parties and the education issues? - the results of a TES survey carried out by NOP Market Research Ltd

Analysis: Philip Venning. Additional research: Lois Rodgers

Strong support for pay to be linked to performance

The poll reveals that teachers:

- Will vote Tory, in spite of the education cuts
- Favour the Alliance at the expense of Labour
- Consider pre-school education important, but have little time for political issues like vouchers and student loans
- Want compulsory vocational courses for all pupils over 14
- Want a stand to be taken on racism in the classroom
- Are divided about peace studies and political education

- Want to keep corporal punishment and compulsory religious education
- Are not keen to admit handicapped pupils to the classroom
- Are split over whether their pay and promotion should be based on an annual assessment
- Favour a declared school policy on sexism
- Like the publication of HMI reports
- Have doubts about how well primary schools prepare their pupils for secondary school

Pupils leave primary schools well prepared for secondary school	Total %	Primary %	Secondary %	Under 36 %	Over 36 %
Agree	45	53	26	33	54
Disagree	33	17	48	43	28

Teachers in secondary schools fail to maintain pupils' interest in education	Total %	Primary %	Secondary %	Under 36 %	Over 36 %
Agree	33	38	37	38	30
Disagree	38	28	38	36	40

Every school should have a declared policy to combat racist attitudes in the classroom	Total %	Male %	Female %	Junior %	Senior %
Agree	74	87	78	77	88
Disagree	18	11	11	10	28

Every school should have a declared policy to combat sexist attitudes in the classroom	Total %	Male %	Female %	Junior %	Senior %
Agree	83	48	56	83	48
Disagree	26	34	18	18	37

Pupils should have the option of a full vocational course at 14 in school	Total %	Male %	Female %	Junior %	Senior %
Agree	68	64	71	64	81
Disagree	28	26	29	26	19

All pupils should have a vocational element in the school curriculum after 14	Total %	Male %	Female %	Junior %	Senior %
Agree	76	76	80	76	67
Disagree	24	24	20	24	33

Parents should receive education vouchers	Total %	Male %	Female %	Junior %	Senior %
Agree	17	16	17	20	12
Disagree	67	70	84	63	74

Importance of Education Issues	Conservative %	Labour %	Alliance %
1. pre-school provision	24	27	30
2. vocational education	24	18	18
3. exam reform	17	18	20
4. independent schools	15	9	8
5. 16-18 EMA	8	4	4
6. DES specific grants	8	8	4
7. MSC intervention in schools	8	8	4
8. parental power	3	1	3
9. vouchers	2	11	6
10. student loans	2	1	2

There was a clear divide between Conservative and Labour voters (with the Alliance somewhere in the middle): a quarter of all Tories agreed with political education, compared with 60 per cent of Labour voters.

The teachers were also asked about two other potentially sensitive issues - what to do about racism and sexism in the classroom. On the one hand, the answer was unambiguous: all schools should have a declared policy of opposition. The only group who were not so keen were senior secondary teachers, and to a lesser extent male teachers in general.

Though there were political differences between those who agreed, even the Tories were quite clearly in favour.

Nearly the same proportion of men as women agreed that schools should tackle sexism (and overall 53 per cent did so). But a third of all male teachers, and over a third of heads and other senior secondary teachers, disagreed. Though Labour voters were strongly anti-sexist, getting on for half of all Tories were so.

In previous years TES/NOP polls asked teachers about current educational concerns, and one of the few issues that has remained constant is corporal punishment.

heads and senior teachers were most willing to see the end of corporal punishment.

Another old chestnut is religious education, which a majority of teachers want to keep. In this case it is the primary schools that are most adamant, while the opponents are drawn mainly from new teachers, men, and senior secondary staff. Two-thirds of Conservatives want to keep it; more than half the Labour voters want it to go.

In some areas the independence of Church schools, and particularly their ability to select their entry, has been a political issue but in the country as a whole this is not so. Many teachers simply do not know or do not feel strongly about it.

In spite of the apparent humanitarian line that teachers take on countering racism, they show themselves in a less favourable light on handicapped children. Four out of 10 teachers do not want handicapped children in their classroom - opposition that is most marked among young teachers. Only senior teachers stand out for being in favour.

Primary and secondary teachers have some damning things to say about each others' teaching abilities. While 63 per cent of primary teachers agree that pupils leave primary school well prepared for secondary schools, only 26 per cent of secondary teachers feel the same. Junior secondary teachers - those most in contact with the new intake - are even more critical.

By contrast, primary and secondary teachers are almost equally divided over whether or not secondary schools maintain their pupils' interest in education. Nearly a third of

Every school should teach political education

Every school should teach peace studies

Loans should replace grants for some HE students

All teachers should accept handicapped pupils in the classroom

Publication of HMI Reports is helpful

Religious Education should remain compulsory

The NOP poll, covering 400 primary and secondary teachers, was conducted of 46 sampling points in England and Wales between May 13 and May 19. Among secondary teachers were set on sex, subject, type of school (comprehensive, selective, and independent). Among primary teachers quotas were set on sex.

Pre-school emerges as top issue

Pre-school education is more important as an issue than more controversial party issues and independent schools, student loans, and vouchers.

Teachers were shown a list of education issues and asked which should be the most important in the election. They were then asked for their second, third, and fifth most important issues.

Amalgamating these issues produces a rank order with the following priorities: pre-school provision, exam reform, and vocational education, the English and Welsh school system, and the school system in Scotland.

Given the same 10 choices of educational issues, Scottish teachers rate exam reform and vocational education as top priority, pre-school education, the English and Welsh school system, and the school system in Scotland, in that order.

As in England and Wales, vocational education was supported by nearly all teachers, and anti-racist and anti-sexist policies met general approval. But unlike England and Wales, Scottish teachers were not keen on pay and promotion being linked to an assessment of their annual performance. Peace studies and political studies were not a whole, but among secondary teachers there was a slight majority in favour of them.

Although the Scots still favour corporal punishment a higher proportion are against it than in England and Wales, with 6 out of 10 senior secondary teachers favouring its abolition.

Conservatives rate independent schools more highly than other teachers, presumably mostly in support. Intervention in schools by Manpower Services Commission purely secondary school teachers attracts its highest rating - 11 per cent - from Labour voters, and young, male teachers.

There was little educational general for student loans (50 per cent of young teachers with them), and Labour voters (50 per cent of whom were young, male teachers).

Vouchers attracted a mere 2 per cent support, with overwhelming opposition from Tory, Labour, and Alliance voters. The publication of HMI reports, on the other hand, was universally popular.

Every school should teach political education

Every school should teach peace studies

Loans should replace grants for some HE students

All teachers should accept handicapped pupils in the classroom

Publication of HMI Reports is helpful

Religious Education should remain compulsory

ELECTION '83

TES/NOP POLL

Even divide north of the border

Scottish teachers are almost exactly divided between the main parties, with the Alliance one point ahead of Labour and two points ahead of the Conservatives.

The findings also show that 1 in 10 will vote for the Scottish Nationalists.

A separate TES/NOP poll of 111 teachers in Scotland shows particularly strong support for the Alliance among secondary teachers, 36 per cent of whom intend to vote for the party. By contrast, primary teachers placed the Tories in the lead.

This is significantly different from the overall voting pattern in Scotland, where Labour is likely to remain the dominant party. In England and Wales past Conservative voters are most loyal, while in Scotland they appear least so.

Given the same 10 choices of educational issues, Scottish teachers rate exam reform and vocational education as top priority, pre-school education, the English and Welsh school system, and the school system in Scotland, in that order.

As in England and Wales, vocational education was supported by nearly all teachers, and anti-racist and anti-sexist policies met general approval. But unlike England and Wales, Scottish teachers were not keen on pay and promotion being linked to an assessment of their annual performance. Peace studies and political studies were not a whole, but among secondary teachers there was a slight majority in favour of them.

Although the Scots still favour corporal punishment a higher proportion are against it than in England and Wales, with 6 out of 10 senior secondary teachers favouring its abolition.

Conservatives rate independent schools more highly than other teachers, presumably mostly in support. Intervention in schools by Manpower Services Commission purely secondary school teachers attracts its highest rating - 11 per cent - from Labour voters, and young, male teachers.

There was little educational general for student loans (50 per cent of young teachers with them), and Labour voters (50 per cent of whom were young, male teachers).

Vouchers attracted a mere 2 per cent support, with overwhelming opposition from Tory, Labour, and Alliance voters. The publication of HMI reports, on the other hand, was universally popular.

Every school should teach political education

Every school should teach peace studies

Loans should replace grants for some HE students

All teachers should accept handicapped pupils in the classroom

Publication of HMI Reports is helpful

Third place for Labour contradicts teachers' left-wing image

Alliance gains but Tories stay well in front

More teachers expect to vote for the SDP/Liberal Alliance than for the Labour Party. But, in spite of four years of education cuts, the Conservatives remain clear favourites among teachers.

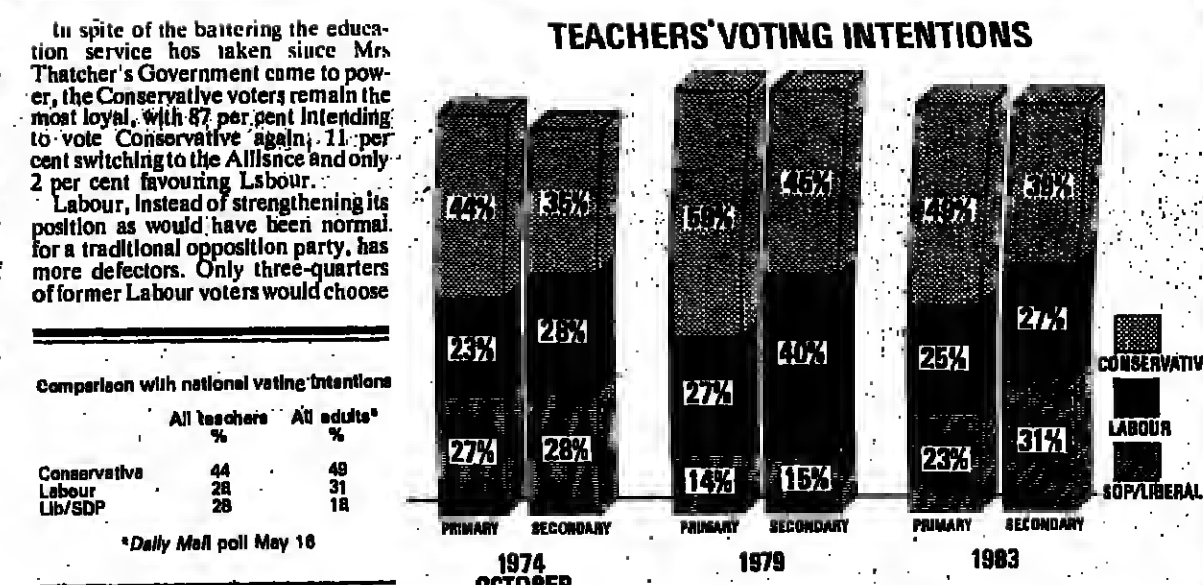
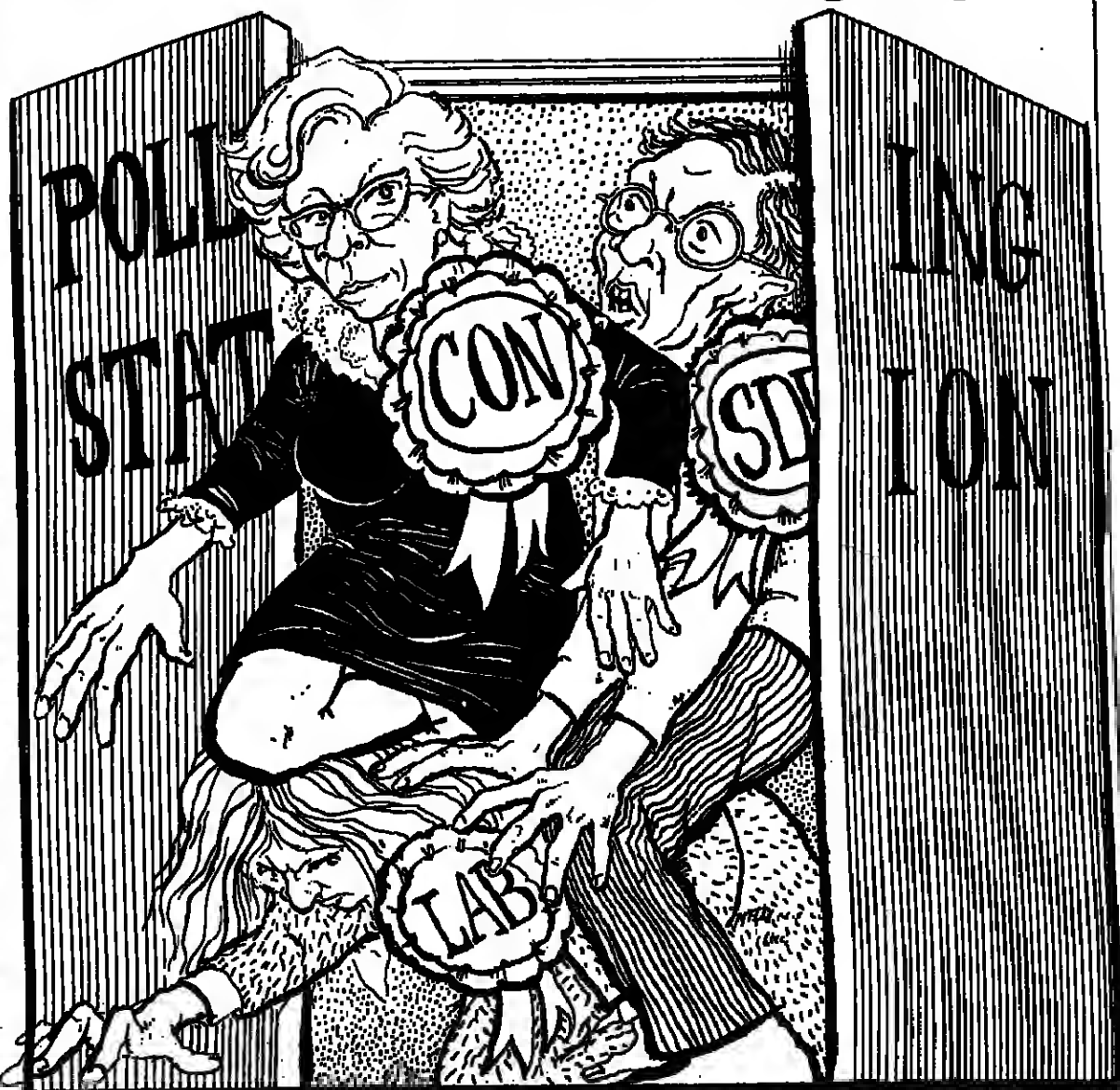
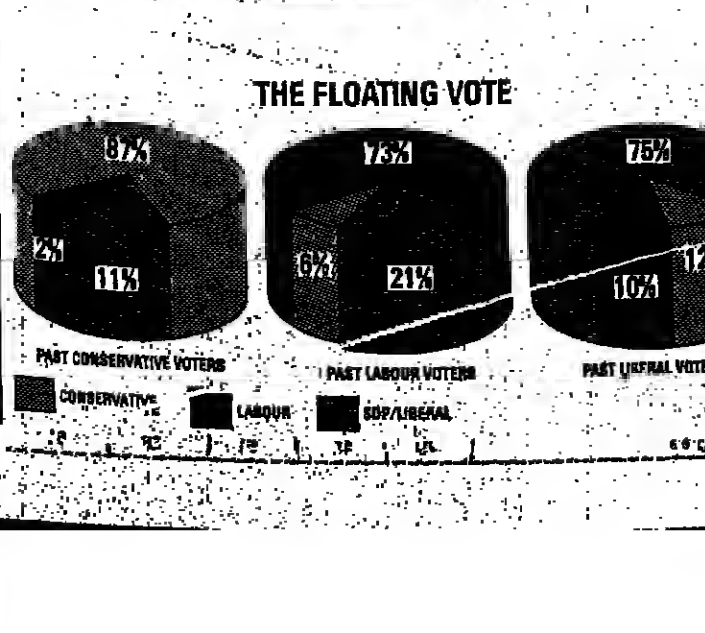
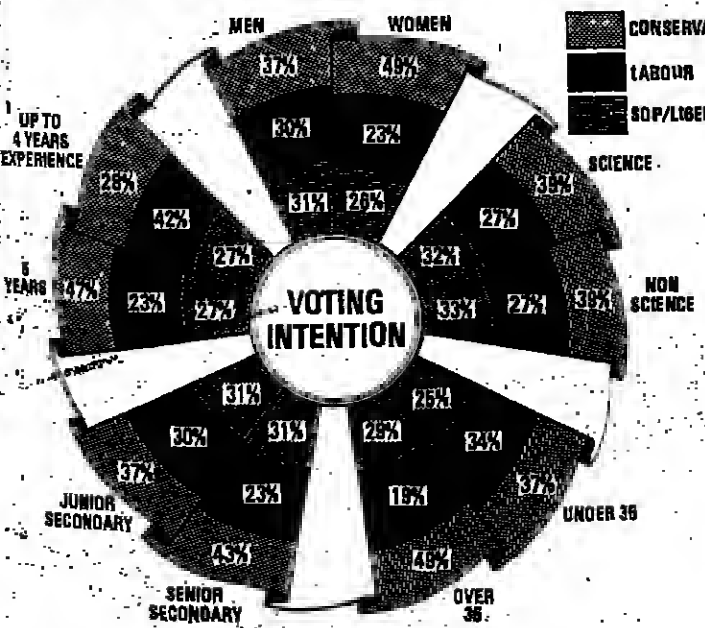
These are among the findings of a poll of teachers in England and Wales carried out by NOP Market Research Ltd. As in previous opinion polls commissioned by The TES at earlier elections, teachers' voting plans contradict their popular left-wing image.

Asked how they would vote, or might vote, 44 per cent of the teachers said Conservative; 28 per cent Alliance; and only 26 per cent Labour. This represents a substantial switch to the Alliance, rather more at the expense of Labour than the Conservatives.

Support for the Alliance was considerably stronger among teachers than in the country generally when the poll was carried out two weeks ago.

On the whole it is the secondary teachers - two-fifths of whom voted Labour in 1979 - who are most responsible for the decline in Labour support and the growth in Alliance popularity this time. Though primary teachers remain, overall, the strongest Tories they, too have had their doubts. As a result nearly a third of both primary and secondary teachers expect to vote for the Alliance.

As educated, middle class voters, teachers might be expected to be less rigid in their voting behaviour, and a detailed comparison between how they voted in 1979 and their current intentions shows a high proportion of floating voters.



Labour again - one in five will now choose the Alliance.

Oddest of all for a party in favour with teachers is the behaviour of former Liberal voters. Only three quarters of them plan to vote for the Alliance, the remainder splitting equally between the other two parties. By contrast the small proportion of Nationalist voters (3 per cent of the sample) are completely unwavering.

The starker difference in voting intentions appears between newish teachers (those with under five years' experience), and their longer-serving colleagues. Only 28 per cent of the former intend to vote Tory, compared with 47 per cent of the latter; and 42 per cent of the newcomers prefer Labour, compared with 23 per cent of the old hands.

Overall strongest support for the Conservatives comes from women primary teachers aged over 35; while Labour does best from younger male teachers. Alliance support is drawn more or less equally from all groups though primary teachers are least enthusiastic.

All but a handful expect to vote on June 9, and 92 per cent did so in the last election - varying from 97 per cent of senior secondary teachers to only 83 per cent of inexperienced teachers.

IT PAYS TO TAKE TIME OFF

TAKE TIME OFF IN PARIS - AMSTERDAM - BRUSSELS - BRUGES - GENEVA - LUXEMBOURG - BOULOGNE - ROUEN - DIEPPE - ARDENNES - IRELAND - INDIVIDUAL HOLIDAYS - WRITE OR PHONE TIME OFF 24 CHESTER CLOSE LONDON SW11 01-225 5070

100-443887-100

OVERSEAS

Questions of terror and bias overshadow peace lessons

UNITED STATES

Peter David analyses the controversy generated by proposals to teach children about nuclear conflict.

Teachers in the United States have begun to wrestle with the painful question of whether - and how - to teach children about the perils of nuclear war.

The National Education Association, the biggest and most controversial of the teaching unions, says the subject should be taught, and has produced an elaborate curriculum guide for high schools. But the guide, produced with help from the politically-committed Union of Concerned Scientists, has been attacked for inaccuracy and bias. Other critics maintain that the subject is too frightening to be taught at all.

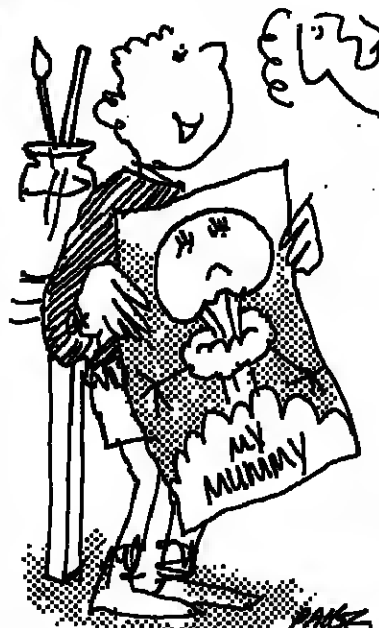
Among this group is President Reagan, who complained recently that he had been receiving "most upsetting" letters from young people who had obviously discussed the most horrifying aspects of nuclear war as classroom assignments. This, he said, was wrong; the letters were "full of terror" and American children ought not to grow up frightened.

The NEA, however, intends to stick to its guns. To counter the argument that learning about nuclear war induces fear, it claims that most American children are already afraid and their anxieties are increased by the absence of clear information.

The curriculum guide contains a foreword by Harvard University psychologist John B. Bates, who says that to take a responsible part in the growing national dialogue about nuclear weapons, and to participate in the worldwide debate now under way to prevent their use.

There is considerable support for this view in the schools. But there is also another question: which facts should children be taught? The future of nuclear deterrence and the growth of support for a nuclear weapons freeze have divided the nation. It is therefore hardly surprising that the union's curriculum guide has been greeted by some observers as partisan and misleading.

The 144-page guide, entitled *Choices: A Unit on Conflict and Nuclear War*, provides 10 lesson plans for teachers and is aimed at junior high school pupils. It takes between two and four weeks to teach. So far the guide has received



a chilly reception in the schools and a hostile reception from the conservative press and other teaching unions.

Human Events, the influential conservative weekly, said the proposed curriculum was designed to create a new generation of anti-nuclear activists. The American Federation of Teachers - the NEA's rival union - said it was slanted, and the *Washington Post* said it amounted to political indoctrination.

Few of the criticisms are borne out by a detailed study of the final version of the NEA guide. According to the AFT, the guide neglects to mention,

that the policy of deterrence. But it does: one class worksheet invites pupils to discuss the merits of six arms-control options, one of which is described as "peace through strength" - and defined as one country trying to persuade another not to attack by threatening massive retaliation.

The NEA and the Union of Concerned Scientists insist that they tried as hard as possible to winnow out traces of bias in the guide. The lesson plans were given a pilot test in 34 states in a process that involved 2,000 pupils, teachers and parents. In most cases, the union claims, the response was overwhelmingly favourable.

The NEA has also proved itself willing to make some changes in the face of criticism. A section describing the dropping of atom bombs on Hiroshima and Nagasaki was expanded to clarify President Truman's

reasons for the decision.

Replying to the critics, Mr Terry Herndon, the NEA's executive director, pointed out that the guide was careful to avoid presenting unresolved issues as though they were established facts. It does not, for example, take sides on the debate over whether the Soviet Union or the United States is the stronger nuclear power. The question is relegated to an appendix containing opposite assessments. One, by the Union of Concerned Scientists, says there is "approximate parity"; another, by the "Committee on the Present Danger" claims the United States has fallen behind and needs to rearm.

Why, then, the enormous public outcry?

There appear to be three possible explanations. One is the fact that both the NEA and the Union of Concerned Scientists happen to be outspoken advocates of a nuclear weapons freeze and cannot, therefore, claim to be impartial referees of the nuclear debate.

The NEA, furthermore, has an unhappy history of producing controversial study guides. Last year, a guide on teaching children about the Ku Klux Klan offended many by implying that the Klan's beliefs were simply an extension of widespread racism in American society.

A second explanation, some observers have claimed, is that the facts about nuclear war are inevitably so horrifying that even a guide careful to avoid taking sides on contentious issues will strike pupils and teachers as enervating and partisan.

One lesson advocated by the NEA, for example, entails the teacher using a map of the pupils' home town to show the area that would be devastated in a nuclear attack and the extent of fallout. Teaching materials include graphic eyewitness accounts of the bombing of Hiroshima.

Finally, the NEA guide courts criticism by proposing that pupils do something about nuclear war instead of simply understanding its dangers. The final lesson urges teachers to encourage their pupils to write to the White House about their concerns, discover whether nuclear weapons are produced locally, and inform local newspapers about class opinions on nuclear war.

Given the general tone of the curriculum guide it is clear that its authors expect most children to take the view that increased spending on nuclear weapons is undesirable.

In one lesson pupils are expected to listen to the protest music of John Lennon, John Denver or Pete Seeger. But nowhere are children told explicitly what their opinions should be: the letters of concern to the White House could as well express concern about the West's inferiority in arms as about the dangers of an arms race.

A flavour of the educational content of the course is provided by the "final quiz" teachers are advised to give their pupils. To answer the quiz properly, pupils would have to know where Hiroshima is, what happened there, and when.

So far, and despite the criticism, the NEA guide appears to be the most comprehensive and the most impartial curriculum material available to American teachers who want to introduce their pupils to some of the issues raised by nuclear weapons. Other guides, such as those produced by Educators for Social Responsibility and the pressure group "Ground Zero", are explicitly in favour of disarmament.

The relative scarcity of teaching materials is unlikely to last, however. The controversy stirred up by the NEA guide is expected to generate other curriculum offerings from organizations with different axes to grind. Eventually, individual teachers will have choices, and avoid the topic completely or make some careful and controversial choices about the teaching material they select.

Report 'adds fuel to militant fires'

SOUTH AFRICA

John Kane-Berman on alleged government distortion of an officially-commissioned report

A public dispute has broken out in South Africa between the Government and members of the De Lange Committee of Inquiry into Education over whether or not the committee favoured racially separate ministries of education. At the same time, Professor Peter de Lange, chairman of the committee, has given a warning that popular confrontation could result if the Government does not act soon on his proposals.

These developments have occurred in the midst of mass meetings on the English-language campuses in protest against the Government's plans to impose racial quotas on them.

Dr Gerrit Viljoen, Minister of National Education reiterated in Parliament the Government's commitment to segregated schools and separate education departments. He said the committee's recommendation of a single central education department was open to two interpretations, one of which was that it meant no more than a single department for certain prescribed "macro-policy matters", with racially separate departments being responsible for operational functions, including the running of schools.

Dr Ken Hartshorne, a member of the De Lange committee - and formerly a senior education official in Pretoria - hit back strongly at Dr Viljoen, accusing him of trying to "kill the issue".

Dr Hartshorne said: "The report is absolutely clear and unambiguous that there should be only one education department nationally."

He added: "It is the Government's right to reject the proposals. What I find completely unacceptable is the minister's attempt to use the report to bolster his own rejection of a key recommendation. Nowhere in the report is there a recommendation that justifies the maintenance of racially separate ministries at central national level. The functions were to be carried out at the so-called 'second' level - which in the context of the report are quite clearly regional."

Dr Hartshorne said the minister had undercut the "whole atmosphere of the report", which "recommends doing away with educationally irrelevant criteria like race right down through the education structure."

"It is a very dangerous move. It could cause protest and rejection of the kind we had between 1976 and 1980."

Recalling that the committee was appointed because of the turmoil in black education at that time, Dr Hartshorne said that the comparative calm while the committee was doing its investigation was an indication of willingness to give it a chance to do its job.

Art imitating West's life

SOVIET UNION

School and college advisers have long been concerned that young Russians have an aversion to Soviet propaganda, government reports and the Kremlin equivalent of White Papers. And they are now suggesting that information about the Soviet way of life and the wicked ways of capitalism should be presented in novels, short stories and dramatized accounts by popular journalists.

According to Mr. I. D. Polozova a Soviet propagandist, school librarians, teachers and the media are failing to make full use of contemporary journalism in educating Soviet youth.

A survey of 2000 students in Moscow and Krasnodar showed that at least 17 per cent of 14 to 15-year olds hardly ever read newspapers or magazines. The rest do so only for such articles as recommendations on teaching assignments.

Polozova admits that the young people often have a greater familiarity with secretly - imported Western political and economic literature. She deduces, the best way to interest Russian youngsters in the Soviet way of life would be to write dramatized accounts and novels.

The documentary approach actively used in the West together with the "social discussion" type of journal could form the basis of a new type of educational literature, she says.

report. It was dangerous to ignore the calm as an indication that the protest and dissatisfaction were of the past. The tragedy was that goodwill and momentum for change built up in 1980 and 1981 were lost by delay.

Mr Franklin Sonn, another member of the De Lange Committee, said the Government's attitude made the position very difficult, considering the people who had told him that, even on the committee, because would come to nothing.

Mr Jan van Eck, Progressive Party spokesman on education, said the Cape Provincial Council, with government rejection of the thrust of the De Lange report, had added fuel to the fire of the militant black and coloured community who believe that school boycott, confrontation, and even violence are the only way of forcing whites to improve black education and negotiating with whites in a way that has no effect.

Professor de Lange himself has been reported as saying in Stellenbosch that unless some of his proposals were accepted "by the next session of the National Assembly, we are into confrontation. Education will be the main part of a confrontation."

It appears that the only way out of education legislation likely to be its way on to the statute book in the current session of Parliament. The Universities Amendment Bill, which files in the face of the De Lange Committee's proposal that universities should be left to determine their own admission criteria.

The Bill - which has provoked large protest meetings on the English language campuses - seeks to end the present case-by-case ministerial permit system for admitting black students to universities with a system of racial quotas that the universities have to apply themselves.

Professor de Lange said the Bill was a step forward but that he was by his committee's recommendation that university councils should be free to admit any students they wished.



Gerrit Viljoen: segregation continues

Every year *The TES* receives a regular trickle of letters from British teachers working overseas who complain of dishonoured contracts, intolerable living conditions and unpaid salaries. But when Hilary Wilce invited readers to tell us just how common these problems were the trickle became a stream . . .

When watertight contracts begin to spring leaks

A written contract is essential for teachers planning to work abroad. And before signing it they should read it very carefully.

Other musts:

- Check on your employers:
- Speak to returning colleagues about conditions:
- Do not rush into undertakings which commit you to the move.

The dangers of giving up a job and home too soon were discovered by a lecturer waiting to take up a college post in West Africa. He signed a contract, left his job, found a buyer for his house, had innocuous visits, obtained visas ("itself no mean feat"), sold or gave away family possessions, made his farewells and then waited anxiously for his air tickets.

When they showed no sign of turning up he managed to extract himself from his house sale but is now unemployed, on the dole and drawing on savings to survive. "It's been a frustrating and expensive business - and embarrassing," he writes. "We keep meeting people who think we're in West Africa."

This correspondent was still hopeful of taking up his post. Some teachers simply never make it. A six-page letter from a Birmingham teacher trying to take up her contract in Zimbabwe chronicled a mind-boggling series of letters, phone calls and telexes all of which failed to secure her either a specific posting, residence or work permits, or travel documents. Yet she had signed her contract last July for a job supposed to begin this January.

Soma, having got there, wish desperately that they had not. In Libya a dreadful conditions were encountered in a British teacher in a kindergarten head, where the school management refused even to divulge holiday dates until a week before the holidays started.

Prices, she wrote, had proved to be much higher than those quoted to

her in England, and unexpected deductions had been made from her salary. Her furnished accommodation turned out to be sharing a water-less, chair-less flat with an unfurnished married couple. Kitchen equipment was "one pan, one desert spoon, one fork, one fruit bowl, two dinner plates, two cups and two saucers". Perhaps not surprisingly, she left after three months.

Another teacher who found herself fleeing back home was one who accepted a contract to teach in the Bahamas, having been assured in writing that she would be posted to an urban area, and to a senior school. When she arrived in the country she was sent to a primary school on a remote, outlying island, and no amount of protestation could change the situation. She and others, she writes, took flights back to London, and to unemployment.

Other complaints received ranged from the serious to the simply irritating. They included:

- Three teachers who arrived at a school in Saudi Arabia to find their contracts changed and their teaching posts expanded. They were given primitive accommodation and were accused of being obstructive when they complained. "We have," wrote one succinctly, "been tied on, spied on and harassed."

- A teacher working in a private school in Spain who found that despite written assurances in his contract that he would not need to pay tax or security contributions, nevertheless found himself paying out 7,000 pesetas a month. The head had told teachers that since their salaries had been upped, the contracts they had signed no longer applied. Promised gratuities and other benefits were not honoured as a result.

- A Commonwealth exchange teacher reported swopping his house and car in England with an Australian teacher. Arriving in Australia he



Teaching abroad . . . inevitable element of risk

found "a dangerously defective old car in Sydney to drive 200 miles to a dirty and defective home in Canberra". On his return home he found his car damaged beyond repair and nearly £1,000 worth of unpaid bills.

- A principal education officer working at a teacher training college in Nigeria who had failed to obtain his last 24 days' salary, despite numerous official letters of reassurance that the money would be paid to him.

- A teacher in his 50s who wrote from Malawi to say that the topping-up of teachers' salaries with British aid money had been withdrawn from his school leaving him and colleagues much the poorer as a result.

- An exchange teacher who found that on going to work in the United States his income had dropped by 25 per cent due to the falling pound. "It is deeply embarrassing to be unable to participate in the life of one's American school and community because one only has enough money for essential food and clothing," he wrote.
- An English teacher who wrote from

TO EDUCATIONAL ADMINISTRATORS AND HEADS

YOU MAY NOT SUFFER FROM

TECHNOFEAR

OR DO YOU?

ANYWAY, YOU MAY WELCOME AN OPPORTUNITY TO CONSIDER:

- (1) What can and cannot be done with Microcomputers in the classroom;
- (2) What the Educational implications are.

EFVA plans to conduct seminars for busy educational Administrators and Heads to study the problems.

For more information write to:

EFVA (Training Dept)
Paxton Place
Gipsy Road
London SE27 9SR

THE TIMES SUPPLEMENTS' REPRINT SERVICE SCHOOL VISITS

In February this year *The Times Educational Supplement* published a special 16-page feature on School Visits. It gives details on day trips to various museums, the Stock Exchange and historical buildings all round the UK as well as covering Venture Weeks, a "Do-it-yourself Europe" survival course together with tips on how to make your school visits enjoyable occasions for both pupils and teachers.

This is now available in reprint form, price £1.00 and can be obtained by sending a cheque/postal order made payable to: Times Newspapers Limited (no cash please) to Frances Giddard, The Times Supplements, Priory House, St John's Lane, London EC1M 4BX.

TALKBACK

Design and fall

RICHARD HICKMAN

Ever since American politicians blamed the US failure to beat the Russian's Sputnik on the lack of creativity in their education system, it has become a cliché that government, industrialists and other Philistine clans see design as a means towards a specific utilitarian end.

Rick Rogers comments ("The design of Britain" TES, April 29) that "the Prime Minister and the Government seem to have a narrow view of design" is something of an understatement. What does Margaret Thatcher mean when she says: "Syllabuses are arranged to give greater merit to 'pure art than to the practical application of design'?"

Any attempt to take out or not include the intuitive and expressive elements from design syllabuses should be firmly resisted, otherwise design teachers would be left with

banal product-orientated sets of exercises differing little from secondary school craft lessons, but labelled CDT.

The expressive arts - music, fine art, poetry and drama - have a valuable part to play in our schools, not only as subjects in their own right but also as an underlying feature right across the curriculum. Never mind combining art with metalwork: what about music with physics and poetry with maths? The creative approach to subject areas has never been the sole prerogative of the arts but the Gradgrind approach still reigns supreme in some schools outside of art and design departments, and in too many cases within them also.

"Problem solving" is the design cliché used as the glue to tie together superficially dissimilar areas. The usual outcome unfortunately is a decided convergent set of principles which start with identifying a problem and then, through a series of logical and well-defined steps, solve it. However, not all creative processes work in a logical or well-defined set of actions. In fact it seems a feature of creativity that it is illogical and nebulous. Expressive and intuitive elements should form a significant part of

a design syllabus, not just by inserting the words "imaginative" or "originality" whenever appropriate, but as a basic prerequisite in teaching and learning.

My first flirtation with an integrated design department was in 1975 as a student teacher. I was attempting to reconstruct the Battle of Bosworth with several other teachers, the entire third year, and battle scene sound effects, as a prelude to a group frieze on the subject when I heard nearby the strains of "Land of Hope and Glory" played on several unidentified wind instruments... music, I discovered, was "in with the design department". Since then I have witnessed many a home economics teacher trying very hard to integrate with metalwork, and ceramics lashing heroically with drama.

Even in cooperative and co-operating design faculty, unless the basic precepts of design education are fully understood the faculty will find itself at sea. These basic precepts revolve around the act of creating. While acknowledging the desirability of producing "useful" objects with some students, the process, I feel, should be more important than the product.

On the other hand, it is of little

value imposing a system of ideas and principles upon a group of teachers who are unwilling to understand or work them. It is perhaps better to teach using "traditional" methods well than to teach using "progressive" methods badly. It is pointless having open plan multidisciplinary areas of each teacher builds a little den where in he teaches "his" subject.

Teachers' personalities are often the limiting factors in the school curriculum; the timetable and accommodation can be altered more easily than 25 years of entrenched attitudes. Being a firm believer in the "Leonardo principle", I believe that over-specialization is undesirable below retiring age. Cross-curricular fertilization enriches all subject areas but it is difficult to achieve while there exist faculty and departmental systems in schools where any fluidity is encased in boxes.

Our young charges are neither "scientists" nor "artists"; they are potential creative individuals who need an environment where they can flower according to their abilities.

Richard Hickman teaches art, design and general studies at Melton Upper School, Leicestershire.

Sight and sound

MICHAEL SMITH



Bill Deller's pupil must surely have been unique in thinking that he was an SA that he was required to write and in wondering what he imagined initials stood for. (See Extra, TES, April 29). I can see, although, with all due respect (but also with an honour due), do not really think that I was the less able boys' like Mr Deller's unfortunate lad.

When children are in the process of becoming literate, they invent spellings for words which they learn until such time as they see those words in print. What is quite small we used to sing in our concerning God's love that it is "more than Tangkante". I was young that the probable spelling was what was apparently one word but that was how it was inevitably was rather misty in my mind, but was at about the same time I came across "Tuisnkhanu" in an encyclopaedia. I assumed that Tuisnkhanu was somehow connected with him.

On another occasion, I distinctly recall my great surprise on seeing a sign in the clothes department of West London store declaring "pants" over what I had assumed were "pance".

What was the teacher to learn all this? First of all, perhaps, not to be unduly concerned about it. For many of us, young and older, the fluency of our spoken language outstrips our written language. It is always some steps ahead. Until children attain a certain level of literacy experience they will write what they think they hear.

Our second task, therefore, is patiently to correct them, one step at a time. This corrective process will be hand in hand with our own efforts to introduce our pupils increasingly to the written word.

The boy who wrote SA in the end of his work might have been helped if Deller had said "composition" at least once when he was setting the next question. Teachers are accustomed to saying everything two or three times for the sake of those few who do listen. At the first occasion, we ought to use the vocabulary the second time, and again the third time.

The more experience we give our teachers, the greater will be their appreciation of how our pupils hear and react to what we say. We should organize our own vocabulary accordingly, and it will vary according to the age and ability of those whom we address. Certainly as a comprehensive school teacher I am well aware of the importance, for example, of making certain words and phrases capable of double entendre.

Finally, clarity in our own minds (stemming from clarity of thought) is of the essence. When I was a pupil at the top year of the junior school, my teacher related the story of Ulysses. We were very introduced to the spelling of his name. No problem at all. But as the tale unfolded, my teacher foolishly referred to him as Odysseus, which the equally foolish pupils, who had never heard of him before, but by the time I was some sort of age, I was sure that the teacher was wrong. When he read my subsequent work

Vulnerable, particularly to politicians keen to save money by deeming middle schools primary, enabling reductions in staffing, capitation and centralization of resources on huge 11 or 12 to 18 campuses, middle schools in some areas have been abandoned. Time is short for the others unless the real promise, vitality and learning to have come from the years of torment can be impressed upon the decision-makers. Middle schools could still work and prove all the hopes of the original planners well-founded. HM Inspectors are due to publish a much awaited middle school report shortly. I wonder if it will say that?

Shirley Winhurst teaches at Northfield Middle School, Newport, 10W

Michael Smith teaches in a comprehensive school in Hampshire

Against the stream

SHIRLEY WINHURST

It seems that many people believe that the sorting and labelling processes of the 11-plus examination have been eliminated from our educational system - but not so.

The 11-plus examination still exists in a few areas and even where all pupils are allocated to comprehensive schools, in over 30 per cent of these schools according to a recent survey carried out by the National Foundation for Educational Research.

Admittedly the pupils are all under one roof, but immediately on entry, or within a week or two, they are sorted and labelled. There are many who see this as the only way to organize children for teaching purposes; but look at it from the child's eye view. What is the difference in failing the 11-plus examination and in being placed in the bottom stream or band of a school?

In small schools where pupils are sorted in this way they are placed in streams. In larger schools, they are placed in bands - which is merely a euphemism for streaming. In schools with this type of organization there will always be a bottom stream or band. The children in these bottom streams or bands have been labelled failures at the age of eleven in spite of getting rid of the 11-plus examination.

to school, or within one school, from those who are barely literate to those who just happened to be one or two points behind their peers in any arbitrary test that might have been used for sorting purposes. Or even worse, they might have been placed there because of an unfavourable report from a primary teacher.

Whether the reasons for being placed in the bottom stream or band are any pupil's chances of being moved out are very slim. They are allocated in batches of approximately 30 to each stream, or 90 or so to each band depending on the size of the intake. Having been placed in rank order placed at the bottom of the list are pupils cannot be moved up unless others are moved down.

In some schools, efforts are made to ensure that the curriculum content for pupils in the bottom stream is similar to that provided for other pupils of the same

age so that there is some possibility of transfer to another class. In others, the pupils in the lowest stream have a restricted curriculum, the content of which is entirely different from the other pupils'. Once embarked on this, the gap widens between those in the bottom stream and their peers.

In this type of organization there is no chance of transfer in another group or class. Understandably, those in the bottom streams or bands respond to the label which has been placed upon them. They believe themselves to be failures. An equal opportunity for all children to develop their talents cannot be achieved by merely abolishing the 11-plus. Children need encouragement and they need success. Don't hand them as failures. Give them the chance to show what they can do.

Shirley Winhurst is a former teacher who now does research in primary schools.



ed on one view of the self were soon in need of review, unfortunate for the individual but disaster for a new school requiring positive direction from the outset. Souls in torment have no place in a developing school struggling towards recognition.

This early difficulty induced crisis two. The identity problems of a school very soon found their way into various curriculum plans, resulting in contradictory or inappropriate schemes of work. Some middle schools were being dubbed "muddle" schools.

The identity crisis was inbuilt; who carried the authority, subject heads or year leaders, secondary specialists or primary pastoral persons? Conflict, but soon resolved as explosive disciplinary situations, involving the now older than primary children, demanded a positive pastoral care, of command and subject teaching was seen to be less significant than a pastoral role. Crisis three concerned staffing problems created by that decision. Specialists with hopes for promotion opted out of the Scale 2 ceiling middle schools, preferring the longer promotion ladder of the high school. In some subject areas this did not matter, except in the sense that the cream moved to the top rather than opting for the middle but in shortage specialist areas, like maths, chemistry, craft, and science, gaps in staff skills began to appear. Access to even one specialist in these areas was often a vain hope. Problems thus created were telegraphed when a system designed to operate on one view of the self were soon in need of review, unfortunate for the individual but disaster for a new school requiring positive direction from the outset. Souls in torment have no place in a developing school struggling towards recognition.

cause teachers, under pressure, doing their best, fail to meet satisfactorily the multitude of demands upon them: pastoral care, subject teaching, mixed-ability teaching, in-service training, revision, record-keeping, testing and assessment. With standards coming into question the end of the middle school was in sight.

Shirley Winhurst teaches at Northfield Middle School, Newport, 10W

Michael Smith teaches in a comprehensive school in Hampshire

Pig in the middle

STEPHEN WILKINSON

A bridge across the rapids of early adolescence was one description of the middle school concept. The Flow, the ideal, to intertwine the best of primary practice with secondary style, specialist-led subject teaching has failed to materialize.

Initial expectations were high, despite the variety of interpretations

i.e. a set on the "middle years", and the outlook was optimistic, a promising new venture precipitated by circular 1065. What happened to bring about the current decline in middle schools and the indecent scramble back to the primary/secondary divide? It is possible to trace several crises in the development of middle schools which together suggest some of the reasons why the concept soured.

Crisis one came soon after inception. The drafting of ex-secondary and ex-primary teachers into a new middle school staff required considerable tact from headteachers who themselves were either ex-primary or secondary with limited experience in dealing with the kind of status confrontations which developed. Personalities found

ed on one view of the self were soon in need of review, unfortunate for the individual but disaster for a new school requiring positive direction from the outset. Souls in torment have no place in a developing school struggling towards recognition.

This early difficulty induced crisis two. The identity problems of a school very soon found their way into various curriculum plans, resulting in contradictory or inappropriate schemes of work. Some middle schools were being dubbed "muddle" schools.

The identity crisis was inbuilt; who carried the authority, subject heads or year leaders, secondary specialists or primary pastoral persons? Conflict, but soon resolved as explosive disciplinary situations, involving the now older than primary children, demanded a positive pastoral care, of command and subject teaching was seen to be less significant than a pastoral role. Crisis three concerned staffing problems created by that decision. Specialists with hopes for promotion opted out of the Scale 2 ceiling middle schools, preferring the longer promotion ladder of the high school. In some subject areas this did not matter, except in the sense that the cream moved to the top rather than opting for the middle but in shortage specialist areas, like maths, chemistry, craft, and science, gaps in staff skills began to appear. Access to even one specialist in these areas was often a vain hope. Problems thus created were telegraphed when a system designed to operate on one view of the self were soon in need of review, unfortunate for the individual but disaster for a new school requiring positive direction from the outset. Souls in torment have no place in a developing school struggling towards recognition.

Crisis three concerned staffing problems created by that decision. Specialists with hopes for promotion opted out of the Scale 2 ceiling middle schools, preferring the longer promotion ladder of the high school. In some subject areas this did not matter, except in the sense that the cream moved to the top rather than opting for the middle but in shortage specialist areas, like maths, chemistry, craft, and science, gaps in staff skills began to appear. Access to even one specialist in these areas was often a vain hope. Problems thus created were telegraphed when a system designed to operate on one view of the self were soon in need of review, unfortunate for the individual but disaster for a new school requiring positive direction from the outset. Souls in torment have no place in a developing school struggling towards recognition.

ed on one view of the self were soon in need of review, unfortunate for the individual but disaster for a new school requiring positive direction from the outset. Souls in torment have no place in a developing school struggling towards recognition.

cause teachers, under pressure, doing their best, fail to meet satisfactorily the multitude of demands upon them: pastoral care, subject teaching, mixed-ability teaching, in-service training, revision, record-keeping, testing and assessment. With standards coming into question the end of the middle school was in sight.

Shirley Winhurst teaches at Northfield Middle School, Newport, 10W

Michael Smith teaches in a comprehensive school in Hampshire

THE JERUSALEM FELLOWS

A Program to Develop Leadership for Jewish Education in the Diaspora

Under the auspices of the World Zionist Organization
Sponsored by Bank Leumi Le-Tzfon

A three-year training program in Israel for outstanding young Jewish educators with at least three years experience in the field of Jewish Education and a graduate degree or equivalent.

Commitment must be made to return to the diaspora to work in the field of Jewish Education for a minimum of five years.

For information and applications, please write to: Ms Suzanne Hochstein, The Jerusalem Fellows, Hovevei Zion, 9 Jerusalem, Israel

Just another crack in the wall

Mick Farley describes the gaps in the Youth Training Scheme that further education expects to be made good

Further education has a long and proud history of responding to change. But there is so much uncertainty and concern about the Government's proposals for youth training that they are creating considerable anxiety, fear and even anger in the further education service.

The FE contribution to the Youth Training Scheme has never been specifically defined. The Manpower Services Commission prefers to leave it to be determined locally. So there are substantial variations and the particular role of the service is impossible to predict.

However, the White Paper, *A New Training Initiative: a Programme for Action*, envisaged a very substantial increase in further education for MSC-related work. The estimate is 73,500 full-time equivalent FE places for YTS, compared with around 10,500 taken up in 1981/82 for the YOP. But, as many as half of these places would, before the YTS, already have been in the system; young people on day or block release and on integrated training board courses. So the potential increase is only about 31,500 full-time equivalent places within further education.

Another key assumption in this estimate - and one which underpins the agreement between the CBI and the local authority associations on fees chargeable for the off-the-job element in the employer-based, Mode A schemes - is that the further education service will provide the off-

'a very major threat to the FE service'

the-job component for 70 per cent of Mode A entrants. But the managing agents of the schemes will determine where the compulsory off-the-job education and training is to be done and there is, therefore, considerable uncertainty in some areas about the place of further education in the YTS.

The demand by Mode A schemes for off-the-job work in colleges remains unclear. Already time is very limited if the necessary planning and negotiating are to be undertaken - the more so with some schemes coming on-stream throughout the summer period.

There is, in addition, a worry within further education that the target for Mode A places will not be met and that colleges might be asked, if possibly short notice, to meet any shortfall. In such circumstances, however great their will, the ability of colleges to do so would be severely limited. The position on April 22 was that the MSC had identified 390,000 potential places (84 per cent of the target). Of these 50,000 (11 per cent) had been approved and 23,000 (5 per cent) were available.

Two further factors giving rise to anxiety within the education service are the possible attrition of young people away from full-time education as a consequence of the YTS allowance, and the threat of the privatization not only of the off-the-job component of YTS but also of Mode B provision.

The proliferation of private training firms - some especially created to mount YTS schemes for profit - poses a very major threat indeed to the FE service. It is one the service finds hard to challenge, and one which will require great determination and cooperation with YTS area manpower boards, particularly trade union members, if it is to be met. This issue is, of course, not unconnected with the education service's continuing grievance over its serious under-representation on these boards - a grievance exacerbated by the different ways individual boards approve youth training schemes and by their varying levels of expertise.

If the objectives of quality and of relevance are to be met in the YTS, the active involvement of further education is essential. The service offers high quality training and education facilities, tested programmes, experience, professionalism and support as well as flexibility. These are important components - well marked by some i.e.s.s. and individual colleges - which no newly-established private commercial organization can offer. In the final analysis, the education service will act as a guarantee both to the managing agent and the young person that the YTS offers the kind of learning opportunities intended and needed.



trial deterrent to effective and adequate staff development. But without it the work-based learning as well as the off-the-job education envisaged by the YTS, will be at risk. It requires a substantial shift in attitudes and teachers skills, with teachers increasingly becoming managers of learning rather than instructors.

There are also a number of other outstanding matters that need resolving: the continuing practice of many i.e.s.s. of appointing staff engaged for YTS work on temporary contracts; the introduction of courses available for 48 weeks a year; the use of part-time staff to cover such extended college years; the low recognition for staff engaged on the YTS in salary gradings; and the time allowed for the work entailed in development work in profiling.

Current management structures, at both local authority and institutional level, are also proving inadequate in many instances.

There are still a number of unanswered questions, too, relating to groups with special needs and there is a very real danger of sex and race discrimination in the YTS unless the MSC is more vigorous in their elimination than at present. With employers free to "recruit" trainees directly, the discrimination in the labour market seems likely to creep into the YTS. Employers will select out the higher achievers for Mode A provision, leaving Mode B to cater for the rest (with a further "stratifica-

'a real danger of sex and race discrimination'

tion" between community and workshop-based Mode B1 and the college-based Mode B2. The danger is that those young people disadvantaged at 16 will have further disadvantage heaped upon them by the YTS.

Although the further education service has never been able to guarantee the future of its students, there is a great deal of concern about what will happen to YTS graduates who remain unemployed. They represent a challenge to further education, to devise relevant post-YTS courses and to ensure that existing courses give credit for YTS experience.

There is little cause for optimism either in the medium term outlook. There is already some evidence that the MSC would like to shift the emphasis in the YTS still further away from the needs of young people. An internal planning paper suggests the YTS should relate even more to the economic needs of industry and commerce in 1984/85 with more emphasis on Mode A.

This shift would be principally at the expense of the Mode B2 largely college-based schemes, with some reductions also contemplated in Mode B1. The MSC regards a programme which commands the acceptance of employers as crucial and is contemplating concentrating "on those industries that appear to hold out the greatest prospect of secure longer term employment" and "on private sector sponsors at the expense of, for example, local government".

The chances of resolving the eligibility issues seem slight. Next year about 194,400 is to be provided for the YTS and about half of this will be accounted for by expenditure on this year's entrants staying on into 1984/85. The continuation of the present eligibility rules alone would add a further £400m to the cost next year, leaving very little indeed - nothing at all if all eligible young people were to be taken on.

Shortage of funds also artificially restricts entry to the YTS and the length of stay once there. This is of particular importance to young people with special needs (including the handicapped and many ESL-speakers) and to those who have pursued a vocational course.

The need for FE staff development in the YOP was recognized by the MSC with additional funds. The challenge posed by the YTS is considerably greater and staff development resources need to be made available at least on the same scale in real terms as those made available for the YOP. Accredited centres for staff training have been established in each MSC area, but there is no doubt about the need for the education service about the expertise, and resources available to them, and about their accountability.

No money is available to replace staff on development courses. This could be a substantial

Mick Farley is assistant secretary (FE) of the National Association of Teachers in Further and Higher Education and a member of the MSC advisory group on the content and standards of the YTS.

Conversion piece

Writers on Writing
STV, ITV Fridays 12.30 pm.

In these programmes Richard Hoggart has been discussing with six eminent writers (one a week) the literature they have admired and been influenced by. The mix of his companions has been carefully contrived: two playwrights (Tom Stoppard, Peter Nichols), three novelists (Susan Hill, David Lodge, A S Byatt), and a lone poet (Charles Causley).

The discussions, while all contributing to the theme of "Influence", have varied considerably in their approach. While Susan Hill enthused about Hardy ("his imaginative way of looking at the world somehow struck a chord in me") A S Byatt explained how T S Eliot's writings on "the dissociation of sensibility" have inspired her work. Peter Nichols recalled the impact that Paddy Chayevsky's television plays had on British playwrights in the sixties, while Tom Stoppard made

the interesting point that his writing was influenced by his own reputation: "You're rather stuck with what people think about you in the first place", he said. "We get typed and labelled." Charles Causley, in today's programme, the last in the series, currently interprets "influence" as "inspiration" - on the grounds, I suppose, that he is influenced only by things that happen to him. "The business of writing a poem", he says, "is the result of an experience that knocks one over like a bus".

On the whole, Richard Hoggart has retained the appearance of control over these spontaneous, divergent conversations by pragmatically adapting his questions to the answers he knew were coming. But there have been difficult moments when he has persisted with lines of questioning that weren't getting anywhere. The programme with David Lodge, for example, was characterized by Hoggart's efforts to fit Lodge's work into the tradition of "the novel", and by Lodge staunchly refusing to let him. Acknowledging that "the nineteenth-century classic English novel set up some of the primary methods of representing reality [which] one cannot escape", Lodge insisted that the only significant influences were, for that very reason, the immediate ones - in his case, Joyce, Waugh and Greene. "If you are interested in what I think formed my own writing I think that's where I would stop really." This argument, that influences can be too big to have any significance, was supported by Peter Nichols, who, when asked how he had been influenced by Shakespeare, said "It's like saying... how has being British affected you or, you know, how has being black affected you. It's something you can't do anything about. He's there. Because he's there."

These have been engaging conversations, each writer being, unexpectedly, forthcoming and articulate. Hoggart has occasionally introduced, interlocking "Yes, I know that feeling" or starting a question with "You and I both know..." or comparing his own experiences as a writer with those of his guests. This has meant that instead of being subjects of an interview, the writers have sometimes been drawn into displays of literary chat. To their credit, the writers have resisted this, but it might have been better if they hadn't had to.

Lynne Truss

Accompanying the series is a free booklet, available from "Writers on Writing", PO Box 40, Maidstone, Kent. Send a large SAE.

At the Palace

A new, 10-strong, professional theatre company specializing in productions for young people, is to be established at the Palace Theatre, Redditch, in Worcestershire, from September 5.

The theatre, which has had a chequered career since it was restored by Redditch Development Corporation in 1968, sits at the centre of Redditch New Town, an urban development which has brought the population of the town from 32,000 to 20,000 in 12 years.

The company's artistic director will be Patrick Masfield, a former teacher who has developed a wide experience of community and youth theatre work.

Redditch District Council has added a further £5,000 to their £30,000 annual grant to the theatre, to help in the establishment of the new company. Mr Masfield confidently expects some funding from other sources too. A questionnaire, distributed to 150 schools and educational institutions within a 25 mile radius of the theatre produced every positive support for the venture.

In a pilot period from September 5 to January 14 1984, the new theatre will be mounting four productions for different age groups and providing workshop sessions for teachers and students.

Ann Fitzgerald

ARTS



Dynamic duo

In the week when Jimmy Young played host to Shirley Williams, Nell Kinnoch and Rhodes Boyson, Frances Hill surveys his and Terry Wogan's recent performance.

Jimmy Young has come a long way since "off we jolly well go" and recipes for baked bean crumble. Now he interviews top politicians every few days. Margaret Thatcher recently came on the show. (The Jimmy Young Show, Radio 2, Monday to Friday, 10-12 am). She stayed for an hour. Jimmy Young rattled off questions, friendly and eager, bursting with knowledge, awed and excited but speaking up bravely. He showed thrilled but respectful absorption in all her replies. Yet he was never afraid to press for more definite answers when needed.

"You've certainly given a lot of reasons why unemployment should be a disaster," he said. "But, as I said, in a magazine interview you said that you were convinced that unemployment will soon subside. Now, as I say, at the risk of repeating myself, how soon do you think this is and to what kind of level will you bring it down?"

"I don't know," Mrs Thatcher was forced to reply. (Though of course she did not stop there.) Despite Mr Young's friendly, ebullient manner, his obvious pride in holding his own and his equally evident pleasure in the Prime Minister's frequently calling him "Jimmy", he was well in control of his interview all the way through. He even curbed at least slightly one or two exalted rhetorical flights. His interview with David Steel two days later was equally carefully managed. There was again much first-naming, this time on both sides. At one point Mr Young appeared to call his guest "Dave" but, given his speed of delivery, this cannot be certain. Mr Steel, like Mrs Thatcher, responded with skill to the chance to be "natural", "relaxed" and "himself".

The following week JY kept Michael Foot more or less on the subjects under discussion but without the chumminess, ease or first-naming. There were momentary pauses where names might have been. Michael Foot stuck to his usual declaratory mode of delivery, as though in a hall. Much of the joy and ebullience left Jimmy Young's manner. Although he frequently boasts that his programme is politically neutral, his personal preferences are always quite clear. He likes those who can match his own style; and he almost no skill at breaking the ice with reserved, awkward natives.

It had to happen: Alan Bleasdale's Boys From The Blackout has now been published by Granada both in its original script form (£2.50) and as a "novelisation". That other recent television classic about deprived urban youth, Barry Hines's Look No Further, is now out again from Penguin in novel form (£1.50). Mike Leigh, the guru of improvised drama, this month sees two of his best-known plays in a Penguin edition - Abigail's Party and Cactus Pimples (£2.25). Arnold Wesely's new play, The Days, in the British popular stakes, is celebrated

Mrs Thatcher and Mr Steel are his favourites. Tony Benn comes a close third. ("Oh, I don't know, he's all right," he once remarked to Terry Wogan and the listening millions.) Enrich Powell and Ted Heath do quite well, but Michael Foot and Ray Jenkins are far down the list.

Jimmy Young's delighted amazement at his success as an important political interviewer sometimes spills forth as he chats in Terry Wogan when "trailing" his programme. (Terry Wogan, Radio 2, Monday to Friday, 7.30-10 am.) They giggle together about whether JY will play a particular disc to the "Right Line" who is coming in. JY, despite limitations, deserves to be pleased. This week he discussed education with his three main political spokesmen. Next week he holds a similar session on defence and disarmament. He of course regularly chats to people other than politicians: Hugh Jolly is coming in soon to talk about childcare; a crusty lawyer, soothing doctor and flamboyant grocer, who each appear weekly, are very good value.

No serious issues intrude on the Terry Wogan show. It consists of silliness raised to an art. Listeners' letters share jokes about dandruff, digital watches and Wogan himself. It would be unfair to quote.

Both Jimmy Young and Terry Wogan are so unexpectedly good at their jobs that it is hard to resist an attempt to explain how they do it. They both draw on the lack of assurance and good-humoured, slightly cheeky respect for and fear of authority found in both Irish and English working-class life. When on together they parry insults and giggle and make gentle fun of the "betters". "Are you wearing that tie for a bet?" is a typical thrust. The froth - and the substance - subside after lunch. Traditional formulae take a firm hold. Those who think Radio 4 is a media dodo should try Radio 2 after 12. There is music. While you Work till 12.30. Then dull, Inane Gloria Hunniford interviews show business people, between yesterday's hits, till 2.30.

Familial favourites may be as much loved as ever. But it is a pity that Ed Stewart (2.30-4) cannot present it, and the rest of his programme, in a less tedious manner. Terry Wogan and JY have stepped in for straightforward, witless light radio.

again by a new critical study from Methuen, *Weekend The Playright*, by Glenda Leeming (3.95). This book assesses the plays, their relation to their contemporary context, and their critical reception, and draws on new interviews with Weeker himself. Those who enjoyed Clifford Odets' *Rockets to the Moon* in its recent West End revival can now read it in a dramatist of social protest, Odets Six plays (Methuen £2.75).

M Church

Opera/dance

In a few weeks' time the Arts Council will decide whether or not to adopt Opera and Dance, the report of a study group it set up two years ago. The study was chaired by Dr Richard Hoggart (at the time Vice-Chairman of the Council) and represents the views of a membership drawn from within the Council and its offices. The result could exert a significant influence on opera and dance policy at the end of the century, views currently welcomed from all interested parties.

The emphasis is on practical experiments with conclusions based on existing research, not previously drawn together, or on new tables presented as appendices. Consequently the recommendations have more than muscle because they flow from well-argued and well-recognized needs. Even so, this positive achievement may be negated by the failure of the report to come to terms with the central issues on which all else depends.

The first is the overall level of central government funding. The second is the character and quality of the boards of the organizations viewing funds responsible for spending policies. This is curious because the study group is not aware of controversial issues and conclusions bluntly stated. The Royal Opera House is told, for example, that its policy of basing opera programmes on the availability of international star names "seems to represent... and we are not convinced that... this particular... policy of the Royal Opera House is necessary to the art of opera."

Similarly the Arts Council and, by implication, other funding bodies are told that dance "has been seriously under-funded to the point where economies are now stifling creativity". Unless more funds are made available at every level much of what has grown will be lost.

Such authoritative support will be welcome news to the council's dance panel which has striven for years to win far more than a larger slice of the council's cake. The trouble is, as the report acknowledges, that "the expansion of dance into a major art form at a time when grant-aid for the arts has ceased to grow considerably in real terms and had, rather, begun to show more than keep near or in line with inflation". Even so, such a shift of opinion represents a dramatic change in the attitude of council members and funding officers if not yet in council policy. Once adopted, as we suspect it will be, dance would become a priority of Britain's major arts funding body. What then might happen?

This is where the quality of controlling boards is crucial. They vary as much in competence and efficiency as in the size of the organization and budgets for which they are responsible. Collectively they control the way artists are commissioned, selected and ultimately reach the public. Yet no one questions how these boards are composed and reach their decisions. Present power-relations appear to be accepted by the study group as inevitable. The existing set-up is neither "an inalienable fact of human nature" nor incapable of change. How change might happen is not spelled out, although the many desirable recommendations of the report. Without change of attitude and organization the group's confidence in the possibility of a larger potential audience is unlikely to be realized, nor will the become clear "for strong professional conventions" to reach "the many millions of people" the study group exists for opera and dance, "particular dance among young people".

Adequate funds representing genuinely supportive policies would solve most of the problems of training, encouragement of new work, public education and audience development to which the report draws attention. Without more cash, not even from twenty-first century social history. At the main recommendation to study the legacy of the market on the stage, JY says "It's a tragedy's classic by

Peter Brinsford

BOOKS

A puzzling phenomenon

Maurice Peston on Margaret Thatcher

Thatcher. By Nicholas Wapshott and George Brock. Futura £1.95. 0 7088 2433 1. The Economic Consequences of Mrs Thatcher. By Lord Kaldor. Duckworth £2.95. 0 7156 1750 8.

There is no doubt in my mind that Margaret Thatcher is one of the most remarkable people of our time. In a society which discriminates against women she has risen to the very top. Moreover, she has done this in a game which is more dominated by men than most, and in a party which represents the forces of reaction. Although I cannot conceive of circumstances in which I might vote for her, it is impossible not to admire the driving force and the personal achievement.

The paradox is, of course, that despite that, she receives not even grudging admiration in what might be called progressive circles. The women's movement, which becomes more bizarre by the day, gets no pleasure from the existence of a woman prime minister. The Labour Party sometimes appears to hate her more for her sex than her politics, and there is no shortage of Tories who dislike her for the same reason. (In addition, of course, there are those who object to her as a parvenu.)

This biography is very much in the British tradition. It gives a straightforward account of her life coupled with a certain amount of testimony and gossip from unnamed sources. It is obviously rushed, possessing neither references nor an index, but is none the less interesting and readable.

Its weakness is the same as its strength. The story is told in a straightforward way without fundamental analysis or explanation. We know what happened, but, except at a rather trivial level, there is no explanation of why. In addition, we see Margaret Thatcher from the outside, but as a two dimensional character without depth.

The authors portray her as a decent lady, friendly, good to her family, rather bossy, intelligent, but not at all intellectual. Her Conservatism goes back a long way in her life as does her determination to succeed. One would have thought that the two would go together with some sort of vision of the world and a deep concern for humanity. If Wapshott and Brock are to be believed, she has neither. In a different political system she would be an apparition. Crossman referred to her as "a tough, able and competent... a kind of professional Opposition Spokesman". But even in power she appears to be a Conservative without a Conservative vision.

Curiously enough, this even seems to be true of her time at DES, at least as it is portrayed here. At the time she appeared to be a consistently reactionary person, working consistently against comprehensive and in favour of selection at 11-plus. Above all she had a kind of hatred if not of education in general then of the maintained schools. But in this book she is shown as a more pragmatic figure, and an outsider in the Heath cabinet. She fought for resources, but to many other areas lost as many battles as she won. My own recollection of DES after she had been used to the time the economy.

Public expenditure has risen relative to national income, and in the election campaign increased expenditure on various social services is defended. Intellectually, the government no longer has an economic position, but Mrs Thatcher still pretends she has.

This leads me to the question of whether economic policy could have been pursued differently. The publication of Lord Kaldor's recent speeches in the Lords reminds us that other possibilities did exist. His voice is one among many, but it is particularly brilliant and clear. He is in the Keynesian tradition, by which I mean two things. First, that the expansion of demand is essential to the expansion of the mixed economy, this not happening automatically but requiring government stimulus. (I myself would also place greater emphasis on supply than he does, but that is by the way.) Second, that economic policy must be applied to real problems as they occur. Proofs about long-run steady states, about eventual good times to come are at best irrelevant and more likely seriously damaging. Those who say that what has happened was a result of bad luck or evil external forces are contradicted totally by the evidence of these speeches. The economic

consequences of Mrs Thatcher were not surprising. What does need explaining is why things have gone on this way for so long, and why the electorate do not find that wholly unacceptable. After all, the conversion necessary is not for Mrs Thatcher to become a Keynesian or a follower of Kaldor. Certainly, she need not espouse the policies of the Labour Party in order to improve her performance.

The puzzle is why her monetarism has been so ineffective and so incompetently pursued. And, given that, why has she not gone back to Conservatism to see where to go next? The answer one usually gives stems from the behaviour of the Labour Party. Mrs Thatcher had too easy a run for too long because the opposition preferred to destroy itself rather than the government.

Reading *Thatcher*, however, I cannot avoid the additional conclusion, facile though it may be, that the explanation also has to be found in her character. She appears to have a single mindedness (including a conviction that single-mindedness itself is a virtue) which makes it virtually impossible for her to accept and admit change. This is excellent when she is on the right path, but disastrous in other circumstances. I conclude, therefore, as I began.

The book is a good read about one of the major figures of today. It told me a lot about her, but very little that I wanted to know. At the end the phenomenon remains just as puzzling. Perhaps, there is less to her than meets the eye, but we will not know that for quite a long time.



Conjuring a victory... The old magician during the 1974 election campaign, shown in Downing Street in perspective by Marla Falkender. An odd mixture of the shrewd and the banal, the book contains some good sketches of the figures now plugging it out on the hustings. Michael Foot: "... It is doubtful if disavowal to this degree is on target even politically". Roy Jenkins: "... stepped straight out of an After Eight Mints advertisement". Denis Healey: "... seen him more closely and you see that the coo glow is an illusion - rather like the flicker without heat of a simulated log fire compared with the leaping flames of the real thing" (£10.95, Weidenfeld & Nicolson - inevitably). Biddy Paismore

Catering for everybody

ILEA's History and Social Sciences Teachers' Centre in Clapham Road was thronged recently by visitors to a Book Fair organized by its warden, Carol Adams. Having as many books in the field as possible on display at the same time is useful for everyone, she says. Teachers can examine new publications and remind themselves of old ones, the centre can make sure its library is right up to date, and the publishers, of course, quite like it too. One of the most useful opportunities it provides is to view alongside the big educational publishers' displays those of community publishing groups and teachers' cooperatives. Perhaps it was the strong presence of these which lent the fair as a whole a marked emphasis on catering for everybody, seeing things from minority points of view, and redressing the gender biases which traditionally characterize so much conventional publishing.

Much of the community publishing is on the lines of "people's history": *A Hoxton Childhood*, *A Hackney Camera: 1883-1918*, *The Good Old Bad Old Days*, all from the Hackney-based Enterprise; *Looking Back and I was a Watford Boy* from Peckham Publishing; *The Town Beelkie* - a Young Girl's Lot, Brighton 1910-1934 from Queenpark. (There are, of course, similar ventures all over the country though not represented here; information about them can be obtained from the Federation of Worker Writers and Community Publishers, 107 Brief Street, London, SE5.) None of these accounts costs more than £1.50 and most are under a pound; at first hand, they're perfect source material for nineteenth and twentieth century social history. At the glossy end of the market on the same lines are *Tringo's* classics by

Maud Pembarr Reeves and Margaret Llewellyn Davies on the experiences of working women at the beginning of the century, now joined by Carol Adams own recent contribution to the field, *Ordinary Lives a Hundred Years Ago*.

The book fair's major hit, though, was the Sussex based teacher's cooperative, Tressell Publications, whose first booklets found a warm reception in these pages and elsewhere a year ago. Teachers at the fair certainly echoed this interest and appreciation; every other enquiry seemed to be for Tressell. They have now added to their original list seven more publications - including *Contemporary Accounts of the Industrial Revolution*, *The Assassination of President Kennedy* and *Prison Reform*. They are currently planning a Peace Studies series, which will follow up the success of *The Nuclear Debate*.

Multi-cultural studies was another well-represented area, though there still seems to be an unfulfilled demand for good, simple world history for the middle school years between about 9 and 14, particularly the history of Africa, Asia and the Caribbean. Some Publishing of Kennington has a comprehensive list by Indian authors - and what a tribute to the English scholar Percival Spear, who has been writing on India longer, probably, than he cares to remember, that his *Twilight of the Moghuls* is included in it - but little for this lower age group. Heinemann, which has a separate social and multi-cultural studies list, has some interesting and well illustrated simple African biographies; the Centre for World Development Education produces extensive material on Third World issues, and Harrop presses worthily on with the World History Project, but the

gaps are still apparent. The community publishers though are good for social studies in this area with accounts by the black community of experiences in this country and memories of other ones. Bogle-L'Ouverture Publications' books are particularly striking, all rooted in some way in the Caribbean cultural tradition, whether as the dialect poetry in *Touch me, Tell me*, or as Brixton Caribbean in the novel *Rallion Blues*.

The opportunity for all this mental updating was welcome, with reminders at the Holmes McDougall stall of the excellent books associated with the Schools Council History Projects, at the ILEA stall of their own learning materials, and - discovering the HMSO's Books for Schools catalogue, which includes titles on history, politics and the EEC. Mathew have just launched a new series called *Leicester Pamphlets for A Level*, including titles on seventeenth and nineteenth century England and the Ancien Regime in France; Longman are still adding usefully to Seminar Studies, notably with *English Catholicism 1558-1642*; Cambridge are planning a new series on Women in History; RKP have a History Work-shop Series.

London teachers who missed the book fair will be able to see anything new at the centre anyway as it will be bought for the library. Their permanent collection of teaching materials and resources, which includes archive packs and a pool of ILEA teachers' own worksheets available for copying, are always on display. The centre is open every Monday to Friday between 9am and 6pm.

Jessica Savage

JOURNAL OF CURRICULUM STUDIES

U.K. Editors: Philip Taylor and Bill Reid, University of Birmingham; and Hugh Sockett, University of East Anglia. Reports Editors: Wynne Harlen, University of London; and Rob Walker, University of East Anglia.

Published quarterly, with over 100 pages an issue, *Journal of Curriculum Studies* will be of interest to anyone working with the school curriculum - in schools, colleges and government. JCS has editorial offices in the UK, the USA, Canada and Australia and so publishes work from the entire English-speaking world.

The publisher offers a half-price personal rate, £15, for Volume 15 (1983). Further details and sample copies are available on request.

Taylor & Francis Ltd. London and New York. 4 John Street, London WC1N 2ET.

TAKE 1 PARIS

Our delightful 25-minute film, *Impressions of Paris* as seen through the eyes of its Painters, is available on fraction to photography and paintings it adds the essence of this captivating city that inspired so many of the great artists.

AMSTERDAM

Second in our series of short films *Impressions of Amsterdam Through the Eyes of its Artists* explores the past and present of this city. It is available on fraction to photography and paintings it adds the essence of this captivating city that inspired so many of the great artists.

TAKE TIME OFF

Our new 15-minute film, *Take Time Off*, is available on fraction to photography and paintings it adds the essence of this captivating city that inspired so many of the great artists.

Belgrade

Box Office: (0203) 20205. Until June 11 Premieres. Thomas Hardy's *FAR FROM THE MADDING CROWD*. Matinees: June 1 & 2.30. (All Seats £1.25). The Belgrade Venue. Until June 11. WAITING FOR GODOT. For special school concessions ring (0203) 25834.

BOOKS

Expertise

Looking for a heart

Computer science tools

explain why that was wrong.

Hugh Davis

Wordlist, dictionary, wordbook, thesaurus

To be fair, there is an introductory note explaining this confusing practice, but that is hardly enough. Even adopting parts of speech as i-

Journal of Management Education 30(6)

RESOURCES

Macmillan Mathematics. (Infant/First School Level)
by Lynda Snowdon. Consultant: Edith Biggs
Workcards and teacher's notes £80.
Macmillan Education
SMP 11-16. (Levels 1 and 2)
by the School Mathematics Project
Booklets, learning aids, ancillary materials
Cambridge University Press

At first sight, it would seem that the first thing to look for in a new mathematics scheme is the coverage it gives to various topics. However, now that the rift between "modern" and "traditional" mathematics is rapidly disappearing, there is much more agreement between rival schemes on what the basic mathematical content should be. Two new schemes published this year try to provide schools with mathematical activity of a different character, rather than to give different or new mathematical topics.

Macmillan Mathematics is for primary schools, whereas **SMP 11-16** is for secondary schools. Both have recently published their first stages. Both try to involve the child in a more direct and meaningful way, though they use different styles according to the age of their target pupils.

Macmillan Mathematics consists entirely of workcards printed a black-and-white, with line drawings as illustrations. The cards are presented in either sections (number, money, time, length, etc) each contained in a slip-case. Each section is graded into four levels, with colour coding on the cards to distinguish them.

Infant levels

The first two levels are for infants, ages five and six. The second two levels for young juniors, ages seven and eight. By far the largest



Above, from Macmillan Mathematics. Below, from a Check Card in SMP 11-16.

on how the cards are used. A school using individualized learning might make do with only one or two sets. Clearly, the scheme is unsuitable if the teacher wants all the class to be doing the same card at the same time. However, the approach suggested in Edith Biggs' overall guide is to organize groups. In some cases several children can work together on the same card.

The scheme gives children a chance to work independently and to discuss what they do. The cards are clear and simple to follow - though many teachers do not like to use only cards. The write-in workbooks or worksheets of other schemes are extremely effective and popular.

However, **Macmillan Mathematics** is well worth inspecting either as a main or supplementary component of a school's resources. Some of the work shows that the different parts of a flag. Other parts

Project team. It will now be on sale alongside the existing highly successful SMP books. No doubt the publishers will let market forces decide whether **SMP 11-16** is to be a replacement of or an alternative to the present scheme.

Tangible core

The core of the scheme is a very large collection of booklets. Most have 16 pages, some have eight. The booklets are extremely well designed, with a skilful blend of diagrams, photographs, line-drawings, tables and graphs. The scheme does not involve extensive practical work. However it does present mathematics in a visible and "tangible" form.

Some of the work shows that the different parts of a flag. Other parts

Maths of a different character

by Andrew Rothery

contain more "pure" mathematics. In both cases the use of visual material makes the mathematics less abstract.

Another noticeable feature of the booklets is the constant reference to people. The mathematical questions relate to situations which show people doing things, or thinking things out. The series presents maths as a warm, friendly - almost human - activity.

SMP 11-16 will provide a booklet-based scheme for the first two years in a secondary school. It will use a book-based scheme for the final three years. Levels 1 and 2, now published, constitute the first half of the booklet scheme. Levels 3 and 4 are promised to appear by early 1984.

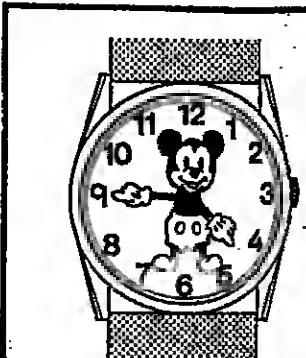
Level 1 contains some simple material which all pupils will need to follow. More able pupils will therefore complete Levels 1-4

in two years, whereas less able pupils may only cover Levels 1 and 2. Level 2 contains some more demanding booklets which would only be used to extend brighter children.

The booklets are supplemented by a teacher's guide, sets of worksheets and books of revision exercises. There is also a supply of different kinds of apparatus and materials, such as cards, string, and tiles. Clearly one disadvantage of splitting the work into components is that the teacher has to do extra organization, and to spend extra time completing the order form. However, such a system does give two kinds of flexibility.

Firstly, by selecting books, children of different ability can be catered for within the same scheme. Secondly, savings can be made when ordering materials. For an intake of 120 pupils, it will not be necessary to buy several class sets. One will be enough as parts can be rotated. Indeed, some books may be used only with particular groups of pupils, and then even fewer copies would be needed.

The flexibility does mean that it is impossible to give an easy answer to the question of cost. In Level 1, the booklets contain very elementary material. Then there are about 11 other booklets. The recommended class set of 120 pupils, four packs of five booklets, and booklets cost around 45p or 35p.



each. Using the quantities suggested by the publisher, a set of booklets and other materials would cost roughly £250 for each level for an intake of 120 pupils. This seems to compare fairly well with buying books, though schools would be well advised to calculate their own requirements very carefully before deciding to order.

The mathematical content does not present "new" topics, as the early SMP books did. It does, however, present mathematics in a less abstract way, trying to involve the pupil more directly. The emerging new series is also well worth a serious inspection.



Theory and practice: the debate continues

invoked has implications for teachers at other levels. For example, practical work has been the focus of a recent film and television study in most secondary schools and colleges, but in primary schools, learning through doing is a principle. Extending it to media studies may achieve an integration of theory and practice that most established courses have either failed

RESOURCES

Highbrow dottiness

Hugh David reviews a selection of spoken word recordings

King Lear, Brideshead Revisited, A Sentimental Journey, Sans and Lovers.
Argo Spoken Word Cassettes, Decca Records Ltd, 9 Albert Embankment, London SE1, £5.99 each.

In a Strange Land
A history of the Jews in modern times
Published by the Michael Goulston Educational Foundation, 80 East End Road, London N3 2SY, £15.50

Argo is the slightly highbrow, ever-so-slightly dotty and therefore uniquely English label on which Decca Records put out, not just another Brinsford or Tchaikovsky fifth, but Vaughan Williams, Peter Warlock and a whole archive of fine recordings featuring the Academy



Gambits for listeners

by Susan Norman

Interact by Guy Aston
Modern English Publications
Workbook, C90 cassette; tape-script

Interact is the quintessential modern EFL book. It is full of communication, functions, information gaps, active learning exercises and fun. None of the ideas is startlingly new. Indeed most are all too familiar, but by their very familiarity they have passed into the common pool of EFL lore and they are certainly well presented and exploited in this book.

The material consists of a workbook (which contains notes for the teacher), cassette and tape-script. It is organized into 20 units, each focusing on a central game or activity which entails the use of a main linguistic function.

The units are well structured so that students are given practice in the language and rules of the activity under the guidance of the teacher before they work in groups.

Variations on each activity are suggested for practice or revision of the same language - or in many cases, the activities are so enjoyable that students are likely to play some of the games out of class.

In the final section of each unit, listening is properly classed as a conversational skill so the students listen to a short, taped, unscripted dialogue between native speakers

(British and American) who in most cases are carrying out the activities the students have just done.

Students are given a task which involves them in listening for specific information, but helps them learn to disregard language superfluous to the task whether they understand it or not - excellent practice for real life.

The language level is genuinely low enough (pre-intermediate) to give the book a wide appeal, but since the emphasis is on fluency and the ability to understand and make oneself understood in English, rather than on strictly accurate use of specific structures, it will benefit many more advanced students particularly those who have been taught by more conventional (and probably less effective) methods.

This is not a course book, and although the activities are graded in terms of languages and complexity the book does not set out to give systematic practice of language structures. It does, however, suggest language items which the teacher will need to explain or contextualise, with the emphasis on colloquial expressions, many of which at higher levels would be termed "gambits".

Interact is an ideal companion to the dull, old-fashioned textbooks so many teachers are still forced to use. It would also be a very good buy for anyone teaching conversational classes, or running holiday courses of language clubs.

Black countries

The Black Country has a numerous black population, and has had for some time. Their presence is being celebrated in a travelling exhibition called "West Africa, West Indies, West Midlands", which sets out to show that the history of the three places is closely linked.

During July the exhibition is at the Broadway School, Perry Barr, Birmingham; in September it will be at Birmingham Cathedral and in October it will move to Wolverhampton's Multicultural Education Centre.

The exhibition has been organised by I. D. Grosvenor, Afro-Caribbean Support Unit, Shireland High School, Waterlooville, Southsea, Waverley, West Midlands.

from *The Canterbury Tales* (The Prologue, The Pardoner's and The Wife of Bath's Tales read in Middle English by Neville Coghill and Prunella Scales) through some rather elderly Shakespeare to Stern, Jane Austen, George Eliot, Shaw and "the moderns".

It is in this latter category that editorial serendipity reaches a peak. Alec Guinness reading the poetry of T. S. Eliot, and Edna O'Brien reading from *The Country Girls* rub shoulders with the original BBC Radio production of *Under Milk Wood*, such children's titles as *Pinocchio*, *Tom Sawyer* and the Rev W. Awdry's *Railway Stories* - and, inexplicably, Britt Ekland reading from her autobiography.

However one thing is common to all: a very good standard of recording. Even the newly-reissued *King Lear* (a recording made in 1961) is in stereo and, if a trifle declamatory for today's taste, clear and beautifully spoken. And that is a description which also fits the adaptations of novels, edited and produced by Peter Orr.

John Gielgud, memorable as Jeremy Irons' irascible father in Granada Television's definitive adaptation, is a sympathetic reader of Waugh's *Brideshead Revisited* - an old man looking back, all passion spent. Donald Sinden's plummy tones are perfectly suited to the gossiping asides and eighteenth-century raciness of Laurence Sterne's *Sentimental Journey*, and - in another new release - Ian McKellen with just a hint of a northern accent, the ideal choice for D. H. Lawrence's *Sons and Lovers*.

Attractively priced, but not specifically intended for the educational



Above, from King Lear. Left, from "Brideshead Revisited".

market (there is a considerable home audience for whom radio programmes like *A Book at Bedtime* are either too early, too late or too frustratingly short). Argo cassettes have nevertheless always found a place in many school resource libraries. In *a Strange Land*, on the other hand, a set of three cassettes with background pamphlets and a teacher's resource book, was specially produced for the classroom.

It sets out to tell the story of the Jews in modern times through five short plays. The first, *Goodbye Russia*, set in 1903, introduces the Levin family who, as a result of a government-inspired pogrom, are forced to leave their native land for a new future abroad.

Their descendants feature in the next two plays. *The Golden Door* sees one branch of the family coming to terms with a life of sweated labour in the New York of 1911; *The Battle of Cable Street* looks at the reaction of Jews in the East of London to the rise of Fascism and anti-Semitism in the mid-Thirties.

The final two plays concern the

Second World War and its aftermath. We follow a family on the long train journey that will deliver them to the doors of the gas-chamber at Sobibor, and travel with a survivor of the Holocaust, an illegal immigrant bound for Palestine in 1947.

Written by Bernard Kops, the plays are complete and admirably well produced; the second and third in particular are moving documentary dramas in their own right. Teachers of English and history, as well as RE and humanities, will find much in them of value. Although each play presents a great deal of information, directly and indirectly, there is only the slightest feeling that the audience is being lectured. (Author of *The Hamlet of Steptoe Green* and *Ezra*, Bernard Kops is an award-winning playwright.)

Background facts on the historical and religious context are for the most part wisely relegated to the 64-page teacher's guide, which also contains detailed advice on the best way to present the material to both Jewish and non-Jewish classes.

THE TIMES

British Schools Chess Tournament 1983-84



Send now for entry form and rules

Closing date for entries
July 23, 1983

Open to teams of six players from any school in England, Scotland, Wales or Northern Ireland. Maximum age limit for players is 18 on September 1, 1983. Closing date for entries July 23, 1983.

To: Mitchell Taylor
4 Alders Road
Hale Lane,
Edgware
Middlesex
HA8 9QG

Please send me an entry form and set of rules for The Times British Schools Chess Tournament 1983-84.

NAME

SCHOOL

ADDRESS

Alun Butler reviews two series for young people

James Bromwich reviews history plays

EXTRA

Steering the right course

Money management perspectives in the 11-16 curriculum. By Howard Smith

In today's increasingly complex world where many young school leavers find the transition to adult life difficult and traumatic, "money management" courses within the 11-16 school should provide pupils with a "survival kit for modern living". But, what is meant by money management, and how might it be developed within the curriculum? Is it for example simply a means of advocating values such as thrift and hardwork as opposed to overconsumption and indebtedness? Or is it basically concerned in dealing with the concept of how families balance outgoing expenditure against income?

In response, both the societal values approach and concept of family budgeting do provide a starting point in the development of a money management perspective, but each plays

only a small part in the overview of money management courses. In an attempt to widen the perspective in the context of the 11-16 curriculum, one may consider including some of the following topics -

Methods of Payment: Types of money; how to write cheques and complete credit slips; credit cards; budget accounts; hire purchase; credit sale agreements; the law relating to credit, and HP.

Banking: Saving and loan facilities; autobank; bank giro; travellers' cheques; bank statements; standing orders; mortgages and bridging loans.

Insurance: Risks and protection. Essential and useful insurance for the general public. Insurance documents and cover.

Dealing with Institutions: (a) The Inland Revenue; (b) The DHSS; (c)

Travel agents; (d) Job centres; (e) Shops; (f) Local councils; (g) Community associations.

Retailing and Consumer Protection: Shops and their services. Consumer law and institutions which can help, eg trading standards departments, consumer advice centres; small claims procedures; the Consumers' Association.

Saving and Investment: The main types available, eg BS share accounts, SAYE, saving certificates; unit trusts, shares, insurance-linked schemes; the concept of investment expenditure. Why people save. Rates of interest, and the effect of inflation and deflation, on saving and investment.

Income and Taxation: Types of income; wages, salaries, fees, commissions, profits and rents. Deductions from income, eg superannuation, graduated pensions. Types of taxes, eg income tax (and tax codes), VAT, Capital Transfer Tax, Customs and Excise, licence and rates. Income tax returns.

House Buying and Renting: Building societies; banks; local authorities; council houses; types of mortgage; estate agents; valuations; solicitors; the rights of tenants; structural extensions and planning permission.

Your own Business: Types of business units. Limited liability. Simple accounting. Forming a company. Business documents-enquiries, orders, invoices, payments, credit notes, and records.

Social and Life Skills: Writing/typing letters. Using telephones. Choosing careers, coping with unemployment, leisure pursuits, hobbies and study courses. Social values and responsibilities. Civil and criminal law. Social rights and welfare, eg equal opportunities, supplementary benefits, maternity allowances.

Family Organization and Finance: "Spending money"; family budgeting; organizing the home on a daily, monthly and yearly basis; running a car; home decorating and repairs - estimating costs, employing contractors and DIY; child care and expenditure; consumer durables - essentials or luxuries.

Communications: Keyboarding with "QWERTY" typewriters and "Moltrons"; desktop home computers and software; VDU's and printers; word-processing and data corrections; storing/finding information in homes and offices; the integrated office; bar coding; POST's; information retrieval-reference books, cassettes, discs, Teletext, micro-query.

There are probably additional topics which some would like to see included, and no doubt some items which on balance should be excluded from the money management perspectives mentioned above.

My proposition is that money management courses should be a curricular entitlement for every child in the 11-16 school. Although the proposition implies that such courses be aimed at the 14-16 age-range, there are those who would suggest that keyboard training should begin at the earlier age of 11.

Certainly however, there are obstacles to such changes given the basic proposition or general view that money management courses should be more widely available within schools. Let us consider the nature of some of these obstacles.

Firstly, there are those commercial or business studies departments where the existing curriculum is unfortunately out of balance. This sometimes takes the form of departments which are far too biased towards office skills. In fact, commerce departments preoccupied with producing high-calibre private secretaries are too narrowly orientated towards a now declining vocational sector, and often fail to make adequate provision for other pupils within the 11-16 school, who might benefit from keyboarding, word processing and money management courses.

In recent years, some schools have tried to redress this balance by introducing either commerce, business studies, economics, law, industrial studies, sociology and/or politics, making them available to 14-16 year old pupils on an option basis, rather than having these subjects restricted only to those in the 16-plus age range.

In some cases where this has been tried, schools have benefited from having a curriculum with wider balance. However, it is perhaps the more academic comprehensive schools who have tried such bold ventures, and who have had access to mixed-ability and O level potential pupils.

A matter for concern with this type of approach is that the subject matter of topics covered in commerce, computer studies, business studies, industrial studies and economics, has too many overlapping features which give rise to repetition, and cast doubt on the existing structure of syllabus. Types of business units, for example, appears on four of the above syllabuses money unit banking on all five; and interdepartmental trade on between three to five of the above, depending upon the actual syllabus in operation.

In these examples, the educational content may differ only in minor details and emphasis between one subject and another, and often only the more experienced teachers are able to differentiate the topic content between subjects.

Therefore, it would be wise to suggest that the educational content of

such courses be rationalized more carefully, or alternatively further controls introduced to restrict pupils choosing courses with overlapping content. Similarly, as we referred to the problem of imbalance earlier, we should also be aware of over-emphasis on the direction of academic subjects.

Another more grave concern is countered by those in these subject areas, is that examination boards have moved too slowly to introducing new examinations in keyboarding, word processing and money management. Where word processing is available, it tends to be restricted to those pupils who have already opted for computer studies, or to the already proficient typists with speeds of over 35 to 40 wpm. One may well ask, what about the pupils from other departments within the school?

Perhaps the last obstacle to change may come in cases where mathematics departments were the first to introduce computer studies into schools, the late 1960s or early 1970s, and where use of school computers is tended to be rather monopolized by such departments. This sometimes means that access for other departments, interested in Computer Assisted Learning (CAL), is restricted in some extent and limited activities. We should recognize, however, since the late 1970s, the information technology revolution has tended to shift away from the sphere of mathematics and programming towards that of increasing development and application in the commercial and business sector of production. In addition, the growth in software and CAL means that computers, previously with disc drive (and with word-processing packages) should be available freely to all departments within a school.

In conclusion, I have attempted to construct a balanced curriculum for money management, or business studies departments, which may act as a basis either for innovation, or further discussion, or modification within existing departmental structures.

Howard Smith is Head of Commerce and Economic Studies at St George's Secondary School, Middleborough. He is author of the forthcoming "Commerce: A Survival Kit" Pitman Books (in January).

Business Studies Department

Computer Studies: Keyboarding Skills 11-16, Word Processing, CAL.

Programs: Basic Lang, Data Processing, Comp Applications.

Other Depts e.g. Science, Social Studies, English, C.O.T.

Home Econ Dept.

Academic Course: Economics, Business Studies, Economics, Commerce.

Possible inclusion on the option scheme: Law, Govt & Politics, Sociology.

approach is aimed at college students of banking and finance, those taking professional examinations, and people concerned practically with the management of non-bank financial institutions.

Wilson contends that it is the non-bank intermediaries rather than the banks which have created the major impetus for innovation in recent years. His discussion of building societies is comprehensive and penetrating, especially his assessment of the argument that successive governments have maintained their fiscal advantages.

J K Galbraith once said that the debate over what should be counted as money is between people who do not know and people who do not know that they do not know. Such definitional problems are emphasized by the increasing provision by banks of home loans, which are recognized as adding to the money

supply, whilst lending by building societies is not similarly regarded on account of the technicalities of the money supply definition.

Wilson concludes that a detailed solution to monetary control exists, nor is one likely to exist in the future. But his analysis demonstrates that a policy of monetary control must be complemented by control of non-bank intermediaries. The distributional effects of monetary control, first highlighted by Radcliffe, have meant that attempts to confine money creation have been self-defeating.

It may be doubted how much effect the abolition of the bank's interest rate cartel has had, and Wilson avoids the difficulty of credit control of the monetary status of credit cards. Otherwise, his logical examination of the system is scholarly and persuasive.

David J. Whitehead

likely that if the project is a success (early signs since the first examination in June 1981 are encouraging) further development work may lead eventually to a syllabus for 16-year-olds, if teachers express an interest.

In devising the syllabus, the Board wanted to emphasize its relevance to everyday life and how it might help to develop informed citizens capable of handling financial matters with confidence and with an understanding of their importance. The aims of the syllabus are broad, rather than specialist; it is not intended to be specifically vocational but, it is hoped, will promote the general education of the student by assisting in the development of numeracy and literacy within the subject matter of finance. No prior knowledge of accounting, commerce or economics is required by students, and it is intended that it can be taught within one academic year, allowing about three to four hours' teaching time per week.

The subject content of the syllabus is divided into three main areas. Part I (Sources and the Cost of Finance for the Individual) looks at the ways in which individuals can receive income, for example, how wages and salaries are structured and calculated. Different methods of saving to earn income are investigated, as are the various ways of borrowing money, such as through banks, building societies, or finance houses.

Part II deals with The Expenditure of Individuals and begins by discussing expenditure classifications - fixed and variable; revenue and capital. It goes on to study major aspects of spending such as accommodation (purchasing or renting) and insurance, together with the way direct and indirect taxation affect the individual's purchasing power.

Finally, Part III (Construction and Interpretation of Accounting Statements) represents the "business finance" section of the syllabus. The aim here is to enable students to grasp a little of the language of finance, so that they can not only "translate" from that language by the interpretation of simple examples of income and expenditure accounts or balance sheets, but also into that language by the preparation of elementary financial statements from given data. No knowledge of double-entry bookkeeping is required, but the idea is for students to be able to understand and the summarized published accounts of limited companies, and be able to prepare, say, a simple income and expenditure statement for their local cricket club or a social club. It is hoped that all this subject matter will not be prescriptive, but will serve as a basis for a wide variety of courses in schools and colleges.

The examination is by means of two written papers, of two hours' duration each. Both papers range over the whole syllabus and the emphasis is two-fold. First, the aim is not to be just a test of arithmetic, (though the encouragement of greater numeracy is an integral part of the course); the questions try to assess the student's understanding of the principles underlying personal and business finance, and the ability to communicate that understanding effectively. Second, the questions aim to be practical rather than theoretical, in that they pose circumstances or problems which are constantly met in everyday life. Thus, the hope is that the use of realistic figures and situations in the

Personal and business finance: a GCE syllabus

By Peter Stanbrook

Reactions in 1979 to the announcement by the Associated Examining Board of a new O (Alternative) level syllabus in Personal and Business Finance varied considerably. "A first time idea. It promises to be a genuine help to youngsters about to enter the harsh realities of the world outside school", was the opinion of the London Evening News. "The education reformers' latest fatality", commented the Daily Telegraph bluntly.

Certainly the introduction of a GCE syllabus and examination of this kind has been a novel event and owes much to the recent spread of coherent money management courses within schools and colleges, backed up by the ever-improving resource material of organizations like the Banking Information Service and Life Offices Association.

Some teachers will argue fairly that money management education is something for students of all abilities, since its usefulness is universal. Indeed, from one's own classroom experience, courses of this or a similar kind were popular with a varied range of arts or science students within a lower-sixth General Studies programme. However, during the mid-1970s, the Board began to receive requests from its centres that a syllabus be developed to provide a public examination for those who wished to obtain a formal qualification.

Development work on the project began soon after, being directed towards a GCE O (Alternative) level syllabus. Thus, in this first experiment, the Board was aiming initially at a target group of 17-year-olds (or those in adult education), taking Personal and Business Finance within one of a wide variety of courses. It looks very

likely that if the project is a success (early signs since the first examination in June 1981 are encouraging) further development work may lead eventually to a syllabus for 16-year-olds, if teachers express an interest.

In devising the syllabus, the Board wanted to emphasize its relevance to everyday life and how it might help to develop informed citizens capable of handling financial matters with confidence and with an understanding of their importance. The aims of the syllabus are broad, rather than specialist; it is not intended to be specifically vocational but, it is hoped, will promote the general education of the student by assisting in the develop-

ment of numeracy and literacy within the subject matter of finance. No prior knowledge of accounting, commerce or economics is required by students, and it is intended that it can be taught within one academic year, allowing about three to four hours' teaching time per week.

The subject content of the syllabus is divided into three main areas. Part I (Sources and the Cost of Finance for the Individual) looks at the ways in which individuals can receive income, for example, how wages and salaries are structured and calculated. Different methods of saving to earn income are investigated, as are the various ways of borrowing money, such as through banks, building societies, or finance houses.

Part II deals with The Expenditure of Individuals and begins by discussing expenditure classifications - fixed and variable; revenue and capital. It goes on to study major aspects of spending such as accommodation (purchasing or renting) and insurance, together with the way direct and indirect taxation affect the individual's purchasing power.

Finally, Part III (Construction and Interpretation of Accounting Statements) represents the "business finance" section of the syllabus. The aim here is to enable students to grasp a little of the language of finance, so that they can not only "translate" from that language by the interpretation of simple examples of income and expenditure accounts or balance sheets, but also into that language by the preparation of elementary financial statements from given data. No knowledge of double-entry bookkeeping is required, but the idea is for students to be able to understand and the summarized published accounts of limited companies, and be able to prepare, say, a simple income and expenditure statement for their local cricket club or a social club. It is hoped that all this subject matter will not be prescriptive, but will serve as a basis for a wide variety of courses in schools and colleges.

The examination is by means of two written papers, of two hours' duration each. Both papers range over the whole syllabus and the emphasis is two-fold. First, the aim is not to be just a test of arithmetic, (though the encouragement of greater numeracy is an integral part of the course); the questions try to assess the student's understanding of the principles underlying personal and business finance, and the ability to communicate that understanding effectively. Second, the questions aim to be practical rather than theoretical, in that they pose circumstances or problems which are constantly met in everyday life. Thus, the hope is that the use of realistic figures and situations in the

examination adds to the relevance of the course. Overall, the standard required is that of O level GCE. As yet, after only two years of examinations in this subject, the number of candidates is counted in the hundreds rather than the thousands. But the Board, in initiating this new venture, believes that the interest of schools and colleges in money management is much more likely to grow than to diminish as the value of these courses for all young people is more fully appreciated.

Peter Stanbrook is Subject Officer for Accounting, Business Studies and Economics, Associated Examining Board.

The course in the classroom

By Val Turnham, Roger Woods and Anthony McConway

The business studies department of Amersham College teaches the Ordinary (Alternative) level personal and business finance:

a) as one O/A of several levels, to students on a post-16 O level course; b) as an optional, additional O/A level to students on other business studies courses.

We have been teaching to both categories of students since the inception of the course in 1981. Students in category (b) have to suffice with less class contact than those in category (a), but such is the enthusiasm for the examination that the candidates in category (b) outnumber those in category (a). Several points may be made about our experience to date.

First, and most important, the students definitely like the subject. Many of our students did not like or could not cope with the more traditional O levels in this general area, such as maths or economics, when they were at school. We feel that students can relate to the O/A level in personal and business finance because they can see a goal that is both desirable (because the realisation and relevance of the subject matter catches their imagination), and attainable (because they see it as a "concrete" and hence manageable subject).

Second, staff enjoy teaching the subject because of the considerable scope afforded by the syllabus to place numerous topics (such as pensions, mortgages, the real rate of interest, etc.) which are useful *per se* into a numerical context. In our opinion the level of arithmetical ability required of the student is well judged to simultaneously retain the interest of the more able and yet stretch the less able candidates. Our evidence for this is classroom feedback from students working their way through the specimen 1981 and 1982 papers set by the AEB. We feel that students in the 16-19 age group tend to enjoy the "security" of numbers and getting the "right" answer and the course fulfils this role admirably.

We believe that teaching is all about effective communication between teacher and students and this communication is easy to engender in this course because of the enthusiasm on both sides for the syllabus.

We know that students like the course because they watch the personal finance elements of such television programmes as *The Money Programme* and arrive at college with extracts from newspapers ranging across the spectrum; the personal finance section on

continued

Happiness is a secure future!

Mr. and Mrs. Eric Colley have secured their future...

"I liked the plans the Teachers' Advisory Service offered and decided to invest through them. I put most of my capital into their Guaranteed Income Service; what I like about this is that I know to the penny what I shall receive on specified dates as TAX FREE income; and this is nearly 3% better than any guaranteed rate return I could find elsewhere."

I thought it sensible to invest some capital for growth and income. Mr. Gray did suggest I might put a few thousand into a Capital Investment Bond that could be expected, though not guaranteed, to produce a very good net return. In the first year, this investment grew by over 19% NET; it is currently growing by over 23% NET of tax and charges, enabling me to top up my income. When an insurance policy recently matured, I didn't hesitate to put most of it into this very good investment for capital growth and income."

So after 18 months of retirement, I can say that my investments through the Teachers' Advisory Service have worked and continue to work very well for me and my family."

THE GUARANTEED INCOME/INVESTMENT SERVICE FOR TEACHERS...

- ★ Guarantee 100% security of your investment
 - ★ A regular and safe income guaranteed not to fail
 - ★ Guarantee easy access to your investment
- 10 1/4% TAX FREE CURRENTLY AVAILABLE**

For Guaranteed income and other services, write or phone without delay to secure your financial future.

Investment & Pensions Advisory Service for Teachers
FREEPOST, Addlestone, Weybridge, Surrey KT15 1BR
Tel: Weybridge (0932) 53857/43920.

I/We require a safe dependable income. Please let me have details.

NAME Mr/Ms _____

ADDRESS _____

Tel. No. _____ Date of Birth _____

Retirement Date _____

Lump sum available for investment £ _____

I/We require a regular income or _____ (delete where applicable)

YES _____ NO _____

Signature _____ Date _____

Enclosed for you is a copy of the prospectus and a copy of the application form.

Thank you for your interest in the Teachers' Advisory Service.

Yours faithfully, _____

Teachers' Advisory Service

TEACHERS' BUILDING SOCIETY

10 Lombard Street, London EC3V 8AT
Tel: 025 225 5385

DON'T MISS OUT ON HIGHER RATES OF INTEREST TO INVESTORS

Type of Account	Gross*	Net	Net†
Ordinary Investment	9.64%	6.75%	6.86%
Monthly Contract	11.07%	7.75%	7.90%
3-year Fixed Term	11.07%	7.75%	7.90%

* To basic rate tax payers.
† If half-yearly interest is compounded.

Why not send for details NOW?

Please send me further details of saving with the TBS.

Name _____

Home/Work _____

Address _____

or please telephone 025 225 5385

Member of the Building Societies Association.
Authorised for Investments by Trustees.

TBS 203

Who 'issued' the £1 coin before the Treasury?

Our new RACING TO MATHS Infant and Junior Series include money sums with 11 and 20p coins - and the maths scheme won't break the bank to introduce it.

A. E. Tansley and B. J. Smith have designed a flexible scheme which can be adopted at Infant or Junior level, and which integrates smoothly with other Primary Maths schemes.

Write to our FREEPOST address for an INFANT SERIES EVALUATION PACK, or for Junior Copies of the Junior Series.

HULTON EDUCATIONAL
FREEPOST, AMERSHAM, Bucks. HP6 5BR

BIS BANKING INFORMATION SERVICE
10 Lombard Street, London EC3V 8AT
Tel: 025 225 5385

NEW VIDEO FILMS

BIS has recently produced video films, available in all formats. At present, these are only available when requesting a speaker.

Part One: A Simple Account (Banking Service) All ages (13 and over) and adults.

Part Two: Banking in Industry (Banking Service) All ages (13 and over) and adults.

Part Three: It Doesn't Grow on Trees (Banking Service) All ages (13 and over) and adults.

Part Four: The Money Game (Banking Service) All ages (13 and over) and adults.

Part Five: The Money Game (Banking Service) All ages (13 and over) and adults.

Part Six: The Money Game (Banking Service) All ages (13 and over) and adults.

Part Seven: The Money Game (Banking Service) All ages (13 and over) and adults.

Part Eight: The Money Game (Banking Service) All ages (13 and over) and adults.

Part Nine: The Money Game (Banking Service) All ages (13 and over) and adults.

Advanced analysis

British Financial Institutions by Kevin W. Wilson. Pimlico. Hardback £14.95, paperback £7.50.

The last decade has seen a rapid increase in the funds handled by financial intermediaries such as building societies, National and Trustee Savings Banks, life assurance companies etc. This advanced text analyses the increasingly important role these institutions play, and relates them to the commercial banks and to the United Kingdom financial system as a whole. The

approach is aimed at college students of banking and finance, those taking professional examinations, and people concerned practically with the management of non-bank financial institutions.

Wilson contends that it is the non-bank intermediaries rather than the banks which have created the major impetus for innovation in recent years. His discussion of building societies is comprehensive and penetrating, especially his assessment of the argument that successive governments have maintained their fiscal advantages.

J K Galbraith once said that the debate over what should be counted as money is between people who do not know and people who do not know that they do not know. Such definitional problems are emphasized by the increasing provision by banks of home loans, which are recognized as adding to the money

supply, whilst lending by building societies is not similarly regarded on account of the technicalities of the money supply definition.

Wilson concludes that a detailed solution to monetary control exists, nor is one likely to exist in the future. But his analysis demonstrates that a policy of monetary control must be complemented by control of non-bank intermediaries. The distributional effects of monetary control, first highlighted by Radcliffe, have meant that attempts to confine money creation have been self-defeating.

It may be doubted how much effect the abolition of the bank's interest rate cartel has had, and Wilson avoids the difficulty of credit control of the monetary status of credit cards. Otherwise, his logical examination of the system is scholarly and persuasive.

David J. Whitehead

EXTRA

The course in the classroom

In *The Sunday Times* "Business News" "Money Mail" "You and Your Money" from 19's magazine, and so on. They are also willing to spend some of their own free time after college and at weekends collecting leaflets from the Post Office, banks, building societies and department stores on many topics covered in the syllabus, such as overdrafts, types of accounts, mortgages, the APR, insurance policies and the like.

Third, we believe the strength of the course to be the syllabus content; it is realistically framed to be of direct relevance to students when they leave college. It has been very easy for staff to make the subject matter topical and include current data on, for example, MIRAS, the retail price index, changes in personal tax allowances and changes in national insurance rates for the contracted-in and contracted-out schemes.

One criticism we would like to voice is the absence of an unemployment benefit/social security benefits section, in Part I (Sources and the Cost of Finance for the Individual) of the syllabus. We would like to see such a section included because in the present economic climate many students will not "earn" wages when they leave college/school but, rather, draw transfer payments. Other sections we would like to see included are redundancy payments section in Part I and the costs involved in running and maintaining cars and motorcycles in Part 2.

A fourth point concerns the way in which we teach the course. The students category (a) mentioned earlier were taught by one member of staff in 1980-81 and 1981-82 and are being taught by two members of staff in 1982-83. The students in category (b) have always been taught by several members of staff. The staff concerned are all experienced teachers, and this is a strength of the course. The various parts of the syllabus require "specialist" teachers but, rather, reflects the most realistic use of resources within our particular department.

We are quite sure that any schools or colleges considering introducing the course could easily do so; a commercial mathematics teacher, business calculations lecturer, economist, accountant, or any such "numerate" teacher would be quite capable of teaching the course since it is highly likely that they have knowledge of much of the course content (wages, mortgages, R.P., etc.) from their own private lives.

Finally, I would like to mention the question of textbooks. As mentioned earlier, the syllabus content is such that the "textbook" content is constantly changing, e.g. the recent changes in tax and N.I. rates. The principles change less often but still do so occasionally, e.g. MIRAS. Given these factors, it is not surprising that there is a paucity of textbooks and that those which do exist are rapidly outdated.

Two points can be made. One is that there are still some good textbooks which can be used to raise the level of numeracy of candidates. The textbooks we find useful are: *Success in Business Calculations*, by Geoffrey Whitehead (publisher, John Murray); and *Understanding Personal and Business Finance*, by W. Reay, Tolfree (publisher, Woodhead-Faulkner of Cambridge).

The second point worth mentioning about textbooks is that lecturers/teachers can quite easily keep up to date by using press material, D.H.S.S. handouts, Office of Fair Trading leaflets, and so forth.

To summarize, we have found the OVA in personal and business finance easy and enjoyable to teach to students and we will continue to gather students for it in future years.

The authors are members of the OVA level course team at Amersham College, Bucks.

Spending and saving

Francis Kellaway reviews a new resources pack for teaching money management

Much of the material made accessible to schools by commercial organizations is tainted with the suspicion of advertising or propaganda. It is thus a satisfying pleasure to receive some admirable literature, prepared as a genuine service to teachers and their pupils, which does not ride a self-promotional hobbyhorse.

The Life Offices' Association, together with the Associated Scottish Life Offices, are of course primarily concerned with life assurance. (The distinction between assurance and insurance is an educational topic in itself, but is not the point of these notes). LOA/ASLO, however, do not confine themselves to a specific financial theme in the information they so freely supply.

Their list of publications for school use is impressive. Some, naturally enough, provide guides to life assurance, but wider aspects of money education have a prominent place. Just issued, is a new pack for money management education, under the title "Spending and Saving". It contains 10 copies of a pupil's booklet, sets of worksheets, a wall chart and a brochure of teacher's notes. Remarkably in these days, an initial pack is obtainable free, as is a substantial proportion of the other pamphlets and ancillary matter. Full details are supplied by the Schools Liaison Officer, LOA/ASLO Information Centre, Buckingham House, 62/63 Queen Street, London, EC4R 1AD.

The whole topic of the wise handling of money, coupled with an understanding of the financial obligations of adult living, has long been encouraged as an essential part of the studies of senior pupils. Income and expenditure (shades of Mr Micawber), tax and investment, saving and borrowing, are all too much with us.

Yet a sensible grasp of the why and how of budgeting, credit, inflation and the like can ease many problems. Schools generally are aware of this, but they may not always know how to obtain appropriate resources to aid their teaching.

For decades, almost every relevant

report on the content of secondary school work has made the same sort of exhortation. As one, completely representative, example "Half Our Future" (the Newsom report) asserts that "the basic mathematical equipment for successful everyday living must be acquired before leaving school. Personal budgeting and social arithmetic - gas and electricity accounts, what rates and taxes are about, how local and welfare services are paid for - should find a place in the curriculum of every pupil, not necessarily in the mathematical periods".

Just so, and now offering more straightforward and positive guidelines to the subject than can be found in many an expensive textbook, is this comprehensive pack on spending and saving.

There are sensible comments about the difference between gross pay and net pay, budgeting, the need to keep some funds in reserve (and ways in which to do so with advantage) and the costs and hazards of various forms of credit. The worksheets provide

illustrative practical activities and the teacher's notes explain possible approaches to the notion of money management, the objectives of the various stages of the booklet, and the general aims of the pack. This is a thoroughly worthwhile exercise, and its sponsor deserves deep appreciation. The material is good and efficacious, though one or two modest improvements might be suggested. For instance, instructions on the worksheets might be more explicit. The first sheet, for example, involves a worksheet with "words connected with pay hidden". We are not told where the letters of these words may be found, whether in rows, or columns, or diagonals, forward or backward, or jumbled? Then, at the foot of the sheet, is the phrase "We are stuck, ask your teacher". The booklet of teacher's notes does not in fact carry any pointers to the answers to the problems.

Again, cross references from the worksheet to another are not necessarily effective. Pupils may not see the whole set available simultaneously.

But this is to gild the lily. When a helpful compendium is on offer, quibbles should be *seto voce*. The thing to proclaim loudly is the availability of resource material of significance in an important area of education.

Managing/Budgeting

and request further copies for classroom use. The package contains booklets, wall charts, case studies and specimen bank forms. The booklets cover a wide range of topics from learning how to open a bank account and physically write a cheque, to loans and overdrafts, foreign currency, mortgages, insurance and much more. They are comprehensive, easy-to-follow and there are exercises the children can do which puts the theory into practice.

The level is roughly CSE up to A level but it is intended that they can be used by varying abilities working at different speeds. The wall charts are exciting and colourful and come in packs with teachers notes. Some contain black and white mini versions which can be photocopied. The case studies give real life situations for the pupils to follow and work out for themselves. More than 5 million bank forms are sent out on request each year and these give pupils the chance to practice writing out cheques and paying money into their accounts.

Jim Fairlie feels that one of the most valuable services BIS can offer is their speaker service. Speakers are young bankers in full-time jobs throughout the country who are seconded to BIS for two years. After an intensive weeks training course they are then available, if a school in the area requires a demonstration or further information. Their visit can last anything up to 90 minutes and with visual aids such as films and charts they are able to talk all about the practical aspects of banking and finance.

BIS answers the need for child

involvement in these sessions and the speakers are usually very successful in drawing the children out to talk about their particular interests and worries. They are also there to provide information on careers in this industry. Because of living locally they can give good advice on career prospects in their own area as well as further afield, and give information on likely salaries and qualifications.

Another new scheme BIS is able to offer is a teachers' training service. Teachers are able to come to the headquarters in the city and learn all the up-to-date information on banking and money management. This has proved to be enormously popular as BIS is able to draw on some excellent speakers from the Bank of England and the City. It is a side to their work which they hope to develop further.

Through popular request and because children are more aware from an earlier age nowadays, BIS is introducing its first package for junior schools. This is an ambitious scheme from the sheer numbers involved, but so far the feedback has been extremely favourable.

"We are helping to make children much more aware of the role of banks in the community. This entails breaking down barriers and creating career interest," says Jim Fairlie, "and it is obvious that this interest is starting much earlier now so we want to produce material to cater for this group."

Although originally intended for state schools, BIS is used by schools in every sector. Not surprisingly the most deprived areas are the better the

response from teachers. The greatest enthusiasm comes from schools in the North-east and North-west of England where the material is much needed and speakers are in high demand.

But it is a two-way process whereby BIS helps the schools and they help BIS by supplying information in the form of extra requirements and ideas which would be useful in the classroom.

BIS also goes to a number of private schools and some of their most valuable work is in their liaison with specialist schools. Children in boarding schools often have no idea of the value of money and are afraid of the whole concept of banks.

The best way to teach children money management is to let them handle money themselves. "A real life situation is the best form of money management there is," says Jim Fairlie, "but this requires a very dedicated and enthusiastic teacher to take on the responsibility. BIS hopes that more banks will soon join our group enabling them to extend their service even more."

As Jim Fairlie points out: "It would be nice to know that every child that left school had at least a basic knowledge of how to run his own personal affairs and how to budget for the future."

For further information contact Jim Fairlie, Banking Information Service, 10 Lombard Street, London, EC3V 9AT.

Sponsored training

Enthusiasm and chaos rule in the new Youth Training Scheme. Edward Fennell talks to those who will provide the training

The idea of a one year period of high quality training has clearly been accepted with some enthusiasm by employers, trainers and others who are organizing Youth Training Schemes. It was the quality aspects of the scheme which persuaded the supermarket chain J Sainsbury to come in on a trial basis. Having steered clear of the Youth Opportunities Programme on the grounds that it was not properly structured and was aimed at the "unemployed and the unemployable" Sainsbury's found the rationale behind YTS much more attractive.

Melvyn Pryor of Paddington College in London is running the FE element of a tourism course for the Association of British Travel Agents: "I've been involved in Unified Vocational Preparation and British Education Council General courses with trainees from travel companies for some time but the YTS training programme is much, much better than either of those. The MSC have really provided the initiative and the structure for us to put together a very good course."

So far, then, the claims by MSC that YTS should be something "new and far-reaching" look promising. Scheme organizers concur with the view that it is about "providing a permanent bridge between school and work" and not about "youth unemployment". It is evident that there is widespread concern about the need to equip young people with the skills for the future and that YTS is providing a focus for formalising and refining training programmes.

The British Association of Professional Hairdressing Employers (BAPHE), for example, is coming into the scheme as the national managing agent responsible for up to 5,000 hairdressing trainees. The association sees YTS as important to the future of the hairdressing industry.

"People are prepared to pay for a good hair-cut these days," said David Cohen, Chairman of BAPHE, "but that requires well-trained staff. YTS gives us an opportunity of training the hairdresser of the future properly."

But as David Cohen, Sainsbury's, ABTA and others point out, YTS is capitalising and building on existing expertise - it is giving large numbers of youngsters access to high quality training which in the past has been restricted to a minority. "Most of our YTS trainees will be in skilled areas like butchery, baking, office-work and so on," said Owen Thomas of Sainsbury's, "and while we are restructuring somewhat for YTS the basis of the scheme lies in what we have been doing for some time."

Likewise the better hairdressers will have no difficulty in providing the necessary quality of training but BAPHE sees an important part of its job as being to supervise standards at the lower level and to be selective about which salons it allows into the scheme. "Vetting standards is going to be very important," said David Cohen, "and that is why we are setting up our own training organization with staff around the country to do a liaison and monitoring job."

Even Sainsbury's has decided to take on a new YTS supreme - ironically a former employee of the recently disbanded Distributive Industry Training Board - to make sure the scheme stays on the right lines.

The detailed guidelines on course content issued by MSC seem to be taken seriously. The three part package of "work experience", "further education" with its balance between specific skills and a broad preparation to make youngsters adaptable seems credible even to the most "hard nosed" businessmen. And particularly encouraging for the MSC is the recognition given to the "off-the-job" further education elements,

which many employers are having to incorporate for the first time.

"The trouble is, we are being bombarded by colleges with offers to run the 'off-the-job' parts," said David Cohen, "and frankly we don't think that's right. So we're not expecting to be popular with educationists when we say that we are going to run the 'off-the-job' elements ourselves. Currently we are negotiating to rent residential facilities out of season from holiday camps to run courses there; the manufacturers of hairdressing materials are probably going to run courses; and we'll be hiring outside consultants and trainees to do other parts. Occasionally we shall make use of further education facilities but it will be exceptional."

At Sainsbury's they are more optimistic about what local colleges can provide. "Nonetheless we have been most encouraged to see that organizations like the YMCA may also be providing the 'off-the-job' elements of YTS and so we shall be looking closely at exactly what they can offer."

Even some of the community-based (Mode B) schemes are not necessarily relying much on local authority colleges. The Hampshire Youth Force, the YTS run under the auspices of Hampshire's County Recreation Department, has brought in a variety of outside consultants including the Forestry Commission, Citizens' Advice Bureau, and St John's Ambulance Brigade to run its "off-the-job" course and is setting up its own premises for much of the further education.

"The last thing that our youngsters want is to go back to a classroom," said Roger Thomas, development officer with Hampshire Youth Force. "They want something which is practical and relevant so it is vital that skills like numeracy, literacy and social and life skills are done in an applied context. So we have capitalized on the kids' interests in motor cycles, for example, for a lot of our numeracy work and we've just come back from a week's adventure training in Wootton Bassett where a lot of the life and social skills have been covered."

"Just being in a hairdressing salon itself is a training in life and social skills," said David Cohen. "Virtually every minute of the day you are meeting customers, getting on with them, making them feel relaxed and so on. That is all practical work - you don't need to do it in a classroom."

Learning through controlled and monitored "real life" experience under the careful tuition of trainers is seen to be the key to YTS success.

"Our supervisors take a personal interest in their trainees," said Roger Thomas. "Often they show more concern than the kids' own parents and very much more positive interest than their teachers back at school". The experience gained so far has been on a limited number of pilot schemes where the time and the staff have been available to make sure the exercise functions correctly.

The principles seem to be right but the test will come when the schemes come on full stream in the autumn. "We are aiming to get the best youngsters and hope to operate our normal selection criteria," said Owen Thomas. "Although there are bound to be some dropouts and failures we hope to be able to take on the majority of trainees into permanent jobs."

Sainsbury's is an expanding organization with increasing staff requirements. The fact that with any luck, most of its trainees will get jobs is very good news. But Sainsbury's with its expanding pay-roll is exceptional these days and there will be little room for lame ducks at the recruitment stage.

Likewise the hairdressing employers. "We believe that YTS will be good for the



The last thing that our youngsters want is to go back to a classroom

youngsters and good for the industry. But we are not becoming involved for philanthropic reasons. We are joining the scheme to get access to the best youngsters," said David Cohen.

Inevitably, therefore, it looks as if there is going to be a sharp distinction between recruits to the Mode A and the Mode B schemes. In the totally free recruitment market of YTS very few Mode A managing agents are likely to laden themselves with the handicapped or the socially disadvantaged.

"We're quite happy to take anybody at all," said Roger Thomas about his Mode B scheme, but few Mode A employers are likely to echo him. Meanwhile the youngsters themselves are going to favour Mode A schemes (where there may be a chance of a job subsequently) rather than Mode B (where there certainly will not). Only if the Mode B schemes can come up with very high quality courses indeed can they hope to attract the better qualified trainees.

It will be interesting to see also how far MSC gets with its plan for having "employees" and "trainees" alongside each other within YTS. Many observers believe it will not work.

"There is bound to be tension and divisiveness with the temptation for the employer to favour the employees over the trainees - it's a difficult idea," said one course organizer. Meanwhile, although the proposed £25 weekly allowance for trainees is agreed generally to be a low figure it is not that much lower than what many employers pay school-leaver recruits. In jobs like catering, hairdressing and travel agency work there is only a few pounds difference.

"And of course there may be extra perks in YTS like free trips away - our youngsters have a study visit to a UK and a foreign resort - where they will be actually saving money," said Melvyn Pryor. So although there is a danger that many youngsters will "vote with their feet" and stay out of YTS it is unlikely to affect recruitment to Mode A schemes.

Much more significant will be the recruitment of employers sufficient to provide 300,000 places and the mechanics of slotting young people into the scheme.

"We're taking a tough line," said Owen Thomas. "We'll notify our vacancies to the Careers Service but if they haven't produced the youngsters within ten days then we shall advertise directly."

Confidence in the Careers Service's ability to deliver is not high and most people anticipate chaos during the summer months. "In any case I can't see enough employers coming forward by the autumn," said Owen Thomas. "Perhaps by the end of the first year, if the scheme has acquired a good name, then there will be enough - but certainly not at the beginning."

There is muted enthusiasm also from employers about visits by the Careers Service to counsel the trainees. "They don't know anything about the jobs or the industry so how can they provide effective counselling?" exclaimed one employer. "I don't mind them coming in so long as they don't start causing trouble," was another comment. By contrast Mode B schemes are likely to be more encouraging towards Careers Service co-operation since the outlook and priorities of staff and careers officers are likely to be similar. "We've got a good relationship with our local Careers Service," said Roger Thomas, "and I am sure that they'll play a very useful role."

But while Mode A and Mode B schemes may disagree over their attitude to the Careers Service they are united in their impatience with the MSC and the way it seems to change policy from day-to-day. "Every time you meet an MSC official there is a different explanation of what is happening," was the consistent complaint. "I'm driven almost to despair," said one scheme organizer. "There are three MSC officials with whom I have now decided it is pointless to talk. From now on I am going to by-pass them completely."

"We've got no clear agreements on future funding," said Roger Thomas, "and there is complete uncertainty about what is going to happen."

"I'm afraid they're not sure what they want," said one local authority training officer, "so we've stopped asking them. Instead we now tell them what we intend doing and they always agree!"

So in the run up to YTS there is undiluted keenness about the potential of the new initiative but undisguised apprehension about the nuts and bolts of the operation.

ENDPAGE

Mainstays of the library

RW Street on the reorganisation and improvement of facilities

Stewards Comprehensive School have been developing our library. First, we set up a Library Development Committee to look at existing facilities, and to consider ways to extend them.

The aims of our project were, and still are:

- to extend the amount of reading undertaken by pupils
- to arrange stimulating exhibitions
- to promote the concept of active learning, by self-management using a variety of media, and group work.

Sixteen months ago the library was used as a class-base, which limited its use as a library. Many of the books were dull and discoloured, while others were only suitable for highly academic pupils. There was comparatively little modern, attractively-produced material.

The organization of the library left much to be desired. Books were arranged idiosyncratically, with large factual books on narrow shelves and fiction books on broad shelves. The loan-record system lapsed. Our library was terribly underused, under-valued and abused.

Some improvements were made by an English teacher, and from this beginning the committee drew much inspiration. We wanted to extend our

library resources, and to include audio-visual aids as a stimulus to reading and research.

Once the management structure was established we approached staff who might be interested in co-ordinating and resourcing topic areas. They came from all levels of the school hierarchy and from all subjects. Their project areas were selected according

to personal taste rather than subject qualifications. This diversity has created an exciting atmosphere in the library.

To achieve our aims we had to alter the library area and incorporate an underused sixth form study area. This area is now used for exhibitions and includes carrels for listening to tapes, facilities for slide projection,

and comfortable chairs for reading in a relaxed atmosphere. The sixth form now have individual study booths, built by our head of craft, who also redesigned the library office.

Many of the items on display are the pupils' own work, though we also included materials from other sources. So far, we have had responses from local residents, the town museum, and a loan of sculptures and artwork from the Henry Moore Arts Foundation. With such a stimulating, attractive environment, far more pupils go into the library - as many as 90 a day at the lunch time break.

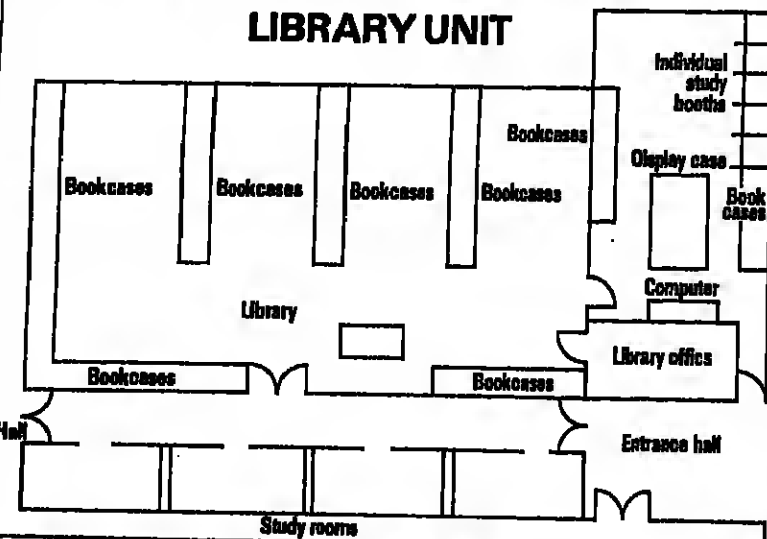
We aim to coach pupils in library skills, using library lessons in the English syllabus and time taken in the study skills programme during the tutorial periods in the lower school. The skills include: finding information from the microfiche; using the computer to locate books; finding required books in the library; and finding information relating to their subject.

These are only a few of the basic skills covered, but they all lead to the higher skills of evaluating the material, co-ordinating and organising the information, and if necessary producing a written account.

Each member of the committee who was responsible for a project section was also given the responsibility of locating and purchasing books. The budget limit was £1,000 a year. There are six main topic areas, and the £6,000 spent on library books, plus further £500, came from Essex Libraries. They aim to improve library usage.

Stewards was one of eight schools Essex awarded this sum of money. (The extra £500 was spent on audio book materials such as posters, cassette tapes, recorders and individual viewers.) Another £1,000 was provided by the school from capital, to purchase projectors, display cases, microfiche and a computer disc drive unit. This last enables pupils to see a computer in a useful working capacity, rather than just in computer games or for playing games.

It is probably too soon to evaluate our hard work, but if one is to measure the library's success by the enthusiasm of the pupils and the ready desire to work in and for the library, then we can say - it's a success! Like all successful projects, this one is dependent upon enthusiastic and innovative staff - we are fortunate that at Stewards we have them.



A ready desire to work in and for a library is a certain measure of success

Appointments vacant

Nursery Education

Headships

Deputy Headships Senior Masters/Mistresses

Other Appointments

Primary Education

Headships

Deputy Headships Senior Masters/Mistresses

Heads of Department

Scale 2 Posts

Scale 1 Posts

Middle School Education

Headships

Deputy Headships Senior Masters/Mistresses

Art and Design

English

Pastoral

Secondary Education

Headships

Deputy Headships Senior Masters/Mistresses

Remedial Posts

Art and Design

Commercial Subjects

Computer Studies

Economics

English

Geography

History

Home Economics

Humanities

Mathematics

Modern Languages

Music

Pastoral

Physical Education

Religious Education

Rural Science

Science

Social Studies

Speech and Drama

Technical Studies

Technology

Other than by Subjects

Sixth Form and Tertiary Colleges

Heads of Department

Scale 2 Posts

Scale 1 Posts

Special Education

Headships

Deputy Headships Senior Masters/Mistresses

Heads of Department

Scale 2 Posts

Scale 1 Posts

Appointments in Scotland

Independent Schools

Headships

Deputy Headships Senior Masters/Mistresses

Art and Design

Classics

Commercial Subjects

Computer Studies

Economics

English

Geography

History

Mathematics

Modern Languages

Music

Pastoral

Physical Education

Religious Education

Science

Technical Studies

Other than by Subjects

Preparatory Schools

Headships

Classics

English

Geography

History

Mathematics

Music

Physical Education

Science

Other than by Subjects

Colleges of Further Education

Heads of Department

Other Appointments

Local Education Authority

Classified Advertisement Rates:
Single Column £1.84 per line (min. 3 lines).
Classified Display £10.50 per a.c.c. (min. 9.5 cm x 2 £109.50).
Box number facility £4.00.
Copy deadline (noon on preceding Monday) preceding Friday of publication.
Corrections deadline 10.30am Tuesday preceding Friday of publication.
Cancellation deadline 4.30pm Monday preceding Friday of publication.

ilea Inner London Education Authority

HEADSHIP

STEPNEY GREENCOAT (C/E) (JMS) SCHOOL
NORBITON ROAD, LIMEHOUSE, E14

TEL: 01-967 3202

The governors invite applications from suitably qualified and experienced teachers for the headship of this school which is now vacant. The successful candidate will take up the appointment on 1 January 1984, or before if possible. Roll 179. Burnham group 4 plus Inner London allowance. Applicants must be active Christians.

Please send foolscap size for application form and further details to Clerk to Governors at above address. Closing date for the return of completed application forms 22 June.

ILEA is an equal opportunities employer.

Brady J.M. & I. School
(Roll 172)
Wennington Road,
Rainham, RM13 9XA

HEADTEACHER GROUP 4

Required for January 1984.

Application forms and further details available (s.e. please) from the Director of Educational Services (Ref: AJP/MEG), Mercury House, Hornford, RM1 3DR.



NORFOLK HEADS

required for
HONINGHAM V.C. PRIMARY SCHOOL,
Norwich (Group 2)

HOWARD COUNTY INFANTS SCHOOL,
King's Lynn (Group 3)

(Previous applicants for these posts will be reconsidered automatically).

Application forms and details from the County Education Officer, County Hall, Marlingau Lane, Norwich NR1 2DL sent on receipt of a stamped addressed foolscap envelope.
Closing date for applications - 10th June, 1983.

Nursery Education

Headships

OXON

LYOALLS NURSERY SCHOOL

Applications are invited from nursery trained and experienced teachers for the headship of this nursery school. The school has a roll of 130. The headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, LYOALLS NURSERY SCHOOL, 100010.

Deputy Headships

Second Masters/Mistresses

HERTFORDSHIRE

BIRCHWOOD NURSERY SCHOOL

Applications are invited from nursery trained and experienced teachers for the deputy headship of this nursery school. The school has a roll of 130. The deputy headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, BIRCHWOOD NURSERY SCHOOL, 100010.

Other Appointments

KENT

SOUTH EAST DISTRICT

SHARPSHOTT NURSERY SCHOOL

Applications are invited from nursery trained and experienced teachers for the headship of this nursery school. The school has a roll of 130. The headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, SHARPSHOTT NURSERY SCHOOL, 100010.

NEWHAM

NEWINGTON INFANTS SCHOOL

Applications are invited from nursery trained and experienced teachers for the headship of this nursery school. The school has a roll of 130. The headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, NEWINGTON INFANTS SCHOOL, 100010.

BIRMINGHAM

EDUCATION DEPARTMENT

HEADTEACHER GROUP 5
ST. JOSEPH'S R.C. CATHOLIC SCHOOL
Little Aston Lane, Sutton Coldfield B75 8PA
Tel: 051 384 6970

NORTH YORKSHIRE

COUNTY COUNCIL

YORK INFANTS SCHOOL

Applications are invited from nursery trained and experienced teachers for the headship of this nursery school. The school has a roll of 130. The headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, YORK INFANTS SCHOOL, 100010.

HERTFORDSHIRE

BIRCHWOOD NURSERY SCHOOL

Applications are invited from nursery trained and experienced teachers for the deputy headship of this nursery school. The school has a roll of 130. The deputy headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, BIRCHWOOD NURSERY SCHOOL, 100010.

Other Appointments

KENT

SOUTH EAST DISTRICT

SHARPSHOTT NURSERY SCHOOL

Applications are invited from nursery trained and experienced teachers for the headship of this nursery school. The school has a roll of 130. The headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, SHARPSHOTT NURSERY SCHOOL, 100010.

BERKSHIRE

COLLINS TOWN INFANTS SCHOOL

Applications are invited from nursery trained and experienced teachers for the headship of this nursery school. The school has a roll of 130. The headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, COLLINS TOWN INFANTS SCHOOL, 100010.

BIRMINGHAM

EDUCATION DEPARTMENT

HEADTEACHER GROUP 5
ST. JOSEPH'S R.C. CATHOLIC SCHOOL
Little Aston Lane, Sutton Coldfield B75 8PA
Tel: 051 384 6970

NORTH YORKSHIRE

COUNTY COUNCIL

YORK INFANTS SCHOOL

Applications are invited from nursery trained and experienced teachers for the headship of this nursery school. The school has a roll of 130. The headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, YORK INFANTS SCHOOL, 100010.

HERTFORDSHIRE

BIRCHWOOD NURSERY SCHOOL

Applications are invited from nursery trained and experienced teachers for the deputy headship of this nursery school. The school has a roll of 130. The deputy headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, BIRCHWOOD NURSERY SCHOOL, 100010.

Other Appointments

KENT

SOUTH EAST DISTRICT

SHARPSHOTT NURSERY SCHOOL

Applications are invited from nursery trained and experienced teachers for the headship of this nursery school. The school has a roll of 130. The headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, SHARPSHOTT NURSERY SCHOOL, 100010.

BUCKINGHAMSHIRE

MILTON KEYNES AREA

Applications are invited from nursery trained and experienced teachers for the headship of this nursery school. The school has a roll of 130. The headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, MILTON KEYNES AREA, 100010.

BIRMINGHAM

EDUCATION DEPARTMENT

HEADTEACHER GROUP 5
ST. JOSEPH'S R.C. CATHOLIC SCHOOL
Little Aston Lane, Sutton Coldfield B75 8PA
Tel: 051 384 6970

NORTH YORKSHIRE

COUNTY COUNCIL

YORK INFANTS SCHOOL

Applications are invited from nursery trained and experienced teachers for the headship of this nursery school. The school has a roll of 130. The headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, YORK INFANTS SCHOOL, 100010.

HERTFORDSHIRE

BIRCHWOOD NURSERY SCHOOL

Applications are invited from nursery trained and experienced teachers for the deputy headship of this nursery school. The school has a roll of 130. The deputy headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, BIRCHWOOD NURSERY SCHOOL, 100010.

Other Appointments

KENT

SOUTH EAST DISTRICT

SHARPSHOTT NURSERY SCHOOL

Applications are invited from nursery trained and experienced teachers for the headship of this nursery school. The school has a roll of 130. The headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, SHARPSHOTT NURSERY SCHOOL, 100010.

BUCKINGHAMSHIRE

MILTON KEYNES AREA

Applications are invited from nursery trained and experienced teachers for the headship of this nursery school. The school has a roll of 130. The headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, MILTON KEYNES AREA, 100010.

BIRMINGHAM

EDUCATION DEPARTMENT

HEADTEACHER GROUP 5
ST. JOSEPH'S R.C. CATHOLIC SCHOOL
Little Aston Lane, Sutton Coldfield B75 8PA
Tel: 051 384 6970

NORTH YORKSHIRE

COUNTY COUNCIL

YORK INFANTS SCHOOL

Applications are invited from nursery trained and experienced teachers for the headship of this nursery school. The school has a roll of 130. The headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, YORK INFANTS SCHOOL, 100010.

HERTFORDSHIRE

BIRCHWOOD NURSERY SCHOOL

Applications are invited from nursery trained and experienced teachers for the deputy headship of this nursery school. The school has a roll of 130. The deputy headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, BIRCHWOOD NURSERY SCHOOL, 100010.

Other Appointments

KENT

SOUTH EAST DISTRICT

SHARPSHOTT NURSERY SCHOOL

Applications are invited from nursery trained and experienced teachers for the headship of this nursery school. The school has a roll of 130. The headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, SHARPSHOTT NURSERY SCHOOL, 100010.

BUCKINGHAMSHIRE

MILTON KEYNES AREA

Applications are invited from nursery trained and experienced teachers for the headship of this nursery school. The school has a roll of 130. The headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, MILTON KEYNES AREA, 100010.

BIRMINGHAM

EDUCATION DEPARTMENT

HEADTEACHER GROUP 5
ST. JOSEPH'S R.C. CATHOLIC SCHOOL
Little Aston Lane, Sutton Coldfield B75 8PA
Tel: 051 384 6970

NORTH YORKSHIRE

COUNTY COUNCIL

YORK INFANTS SCHOOL

Applications are invited from nursery trained and experienced teachers for the headship of this nursery school. The school has a roll of 130. The headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, YORK INFANTS SCHOOL, 100010.

HERTFORDSHIRE

BIRCHWOOD NURSERY SCHOOL

Applications are invited from nursery trained and experienced teachers for the deputy headship of this nursery school. The school has a roll of 130. The deputy headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983. Applications should be sent to the Clerk to the Governors, BIRCHWOOD NURSERY SCHOOL, 100010.

Other Appointments

KENT

SOUTH EAST DISTRICT

SHARPSHOTT NURSERY SCHOOL

Applications are invited from nursery trained and experienced teachers for the headship of this nursery school. The school has a roll of 130. The headship is a full-time post. The successful candidate will be responsible for the overall management of the school and for the development of the curriculum. The post is vacant from September 1983

PRIMARY HEADSHIPS
continued

BUCKINGHAMSHIRE

COUNTY COUNCIL
SOUTHERN DIVISION
WYCOMBE PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wycombe, Bucks. HP12 3JF. Closing date 10th June 1983.

CAMBRIDGESHIRE

PRINCIPAL
PRINCIPAL
Applications are invited for the post of Principal of the school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Cambridge, Cambs. CB2 3RQ. Closing date 10th June 1983.

CUMBRIA

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

DEVELOPMENT

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

SOMERSET

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

WILTSHIRE

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

WILTSHIRE

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

WILTSHIRE

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

WILTSHIRE

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

WILTSHIRE

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

WILTSHIRE

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

WILTSHIRE

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

HUMBERSIDE EDUCATION COMMITTEE
HEADSHIPS

The following posts are required for January 1984

GRANGE FIRST SCHOOL, CAMBRIDGE ROAD, GRIMSBY, SOUTH HUMBERSIDE
(Re-advertisement)
Group 5 N.O.R. Age Range 5-8
(including 29 full-time and 63 part-time Nursery pupils).

HOLY NAME R.C. (VOLUNTARY AIDED) PRIMARY SCHOOL, DANEPARK ROAD, HULL, NORTH HUMBERSIDE
(Re-advertisement)
Group 8 N.O.R. Age Range 5-9
The Governors would welcome applications from practising Catholics.

SKIDBY C.E. PRIMARY SCHOOL, SKIDBY, COTTINGHAM, NORTH HUMBERSIDE
Group 2 N.O.R. Age Range 5-11

FRANCIS ASKEW PRIMARY SCHOOL, NORTH ROAD, HULL, NORTH HUMBERSIDE
Group 5 N.O.R. Age Range 5-9
(including 3 full-time and 44 part-time Nursery pupils).

ST. PETER'S C.E. PRIMARY SCHOOL, CAMBRIDGE STREET, CLEETHORPES, SOUTH HUMBERSIDE
Group 5 N.O.R. Age Range 5-11

Education
HEADSHIPS

ST. THOMAS MORE V.A. (R.C.) UPPER SCHOOL,
TYNE CRESCENT, BEDFORD, MK41 7UL.
From January 1984.
GROUP 10
Owing to the sudden death of the Headmaster, Mr A. J. Doyle, applications are invited from practising Roman Catholics, who are suitably qualified and experienced teachers, for the Headship of this Group 10 Voluntary Aided Roman Catholic Upper School.
Estimated number on roll September 1983: 710 aged 13-18+.
Closing date 17th June, 1983.

ALL SAINTS V.A. LOWER SCHOOL,
CHURCH STREET, CLIFTON, SHEFFORD, BEDS.
GROUP 3
Applications are invited from suitably qualified and experienced teachers for the Headship of this Group 3 Voluntary Aided Lower School. Applications will be particularly welcomed from teachers who are regular communicant members of the Church of England.
Estimated number on roll January 1984: 110 aged 5-9 years.
Closing date 10th June, 1983.

LIVINGSTONE LOWER SCHOOL,
CLAPHAM ROAD, BEDFORD.
GROUP 3
Applications are invited from suitably qualified and experienced teachers for the Headship of this Group 3 Lower School. The School is designated as a school of social priority and has a high proportion of ethnic minority pupils.
Estimated number on roll January 1984: 85 aged 5-9 years.
Closing date 10th June, 1983.
Application forms and further details for the above posts are available from: the Chief Education Officer, County Hall, Clarendon Street, Bedford.

DURHAM

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

HAMPSHIRE

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

HERTFORDSHIRE

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

LANCASHIRE

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

LANCASHIRE

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

LANCASHIRE

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

OLDHAM

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

OLDHAM

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

OLDHAM

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

OLDHAM

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

OLDHAM

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

OLDHAM

COUNTY COUNCIL
EDUCATION DEPARTMENT
WIGAN PRIMARY SCHOOL
Applications are invited for the post of Head Teacher of this school. The successful candidate will be responsible for the school and will be expected to lead the staff in the development of the school. The post is full-time and the salary is £10,000 per annum. Applications should be sent to the County Council, Education Department, Wigan, Lancs. WN1 1AA. Closing date 10th June 1983.

SHEFFIELD CITY POLYTECHNIC

DEPARTMENT OF EDUCATION MANAGEMENT
SENIOR LECTURER IN EDUCATION MANAGEMENT
The Polytechnic wishes to appoint a man or woman with recent successful experience as a Primary School Headteacher, and with the capacity for further professional development. Duties will include contributing to the M.Sc. or Diploma courses in the Department, to short courses and school based consultancy to research and writing, within a very busy department.
Salary Range: £10,173-£11,954 (bar) - £12,816 (under review)
Application forms and further details from the Personnel Officer (Dept. T.E.), Sheffield City Polytechnic, Hallam House, Fitzalan Square, Sheffield S1 2BB, tel. 0742 20911. Completed forms to be returned by 13th June. Sheffield City Polytechnic is an Equal Opportunity Employer.

SHEFFIELD CITY POLYTECHNIC

DEPARTMENT OF EDUCATION MANAGEMENT
SENIOR LECTURER IN EDUCATION MANAGEMENT
The Polytechnic wishes to appoint a man or woman with recent successful experience as a Primary School Headteacher, and with the capacity for further professional development. Duties will include contributing to the M.Sc. or Diploma courses in the Department, to short courses and school based consultancy to research and writing, within a very busy department.
Salary Range: £10,173-£11,954 (bar) - £12,816 (under review)
Application forms and further details from the Personnel Officer (Dept. T.E.), Sheffield City Polytechnic, Hallam House, Fitzalan Square, Sheffield S1 2BB, tel. 0742 20911. Completed forms to be returned by 13th June. Sheffield City Polytechnic is an Equal Opportunity Employer.

SHEFFIELD CITY POLYTECHNIC

DEPARTMENT OF EDUCATION MANAGEMENT
SENIOR LECTURER IN EDUCATION MANAGEMENT
The Polytechnic wishes to appoint a man or woman with recent successful experience as a Primary School Headteacher, and with the capacity for further professional development. Duties will include contributing to the M.Sc. or Diploma courses in the Department, to short courses and school based consultancy to research and writing, within a very busy department.
Salary Range: £10,173-£11,954 (bar) - £12,816 (under review)
Application forms and further details from the Personnel Officer (Dept. T.E.), Sheffield City Polytechnic, Hallam House, Fitzalan Square, Sheffield S1 2BB, tel. 0742 20911. Completed forms to be returned by 13th June. Sheffield City Polytechnic is an Equal Opportunity Employer.

SHEFFIELD CITY POLYTECHNIC

DEPARTMENT OF EDUCATION MANAGEMENT
SENIOR LECTURER IN EDUCATION MANAGEMENT
The Polytechnic wishes to appoint a man or woman with recent successful experience as a Primary School Headteacher, and with the capacity for further professional development. Duties will include contributing to the M.Sc. or Diploma courses in the Department, to short courses and school based consultancy to research and writing, within a very busy department.
Salary Range: £10,173-£11,954 (bar) - £12,816 (under review)
Application forms and further details from the Personnel Officer (Dept. T.E.), Sheffield City Polytechnic, Hallam House, Fitzalan Square, Sheffield S1 2BB, tel. 0742 20911. Completed forms to be returned by 13th June. Sheffield City Polytechnic is an Equal Opportunity Employer.

SHEFFIELD CITY POLYTECHNIC

DEPARTMENT OF EDUCATION MANAGEMENT
SENIOR LECTURER IN EDUCATION MANAGEMENT
The Polytechnic wishes to appoint a man or woman with recent successful experience as a Primary School Headteacher, and with the capacity for further professional development. Duties will include contributing to the M.Sc. or Diploma courses in the Department, to short courses and school based consultancy to research and writing, within a very busy department.
Salary Range: £10,173-£11,954 (bar) - £12,816 (under review)
Application forms and further details from the Personnel Officer (Dept. T.E.), Sheffield City Polytechnic, Hallam House, Fitzalan Square, Sheffield S1 2BB, tel. 0742 20911. Completed forms to be returned by 13th June. Sheffield City Polytechnic is an Equal Opportunity Employer.

SHEFFIELD CITY POLYTECHNIC

DEPARTMENT OF EDUCATION MANAGEMENT
SENIOR LECTURER IN EDUCATION MANAGEMENT
The Polytechnic wishes to appoint a man or woman with recent successful experience as a Primary School Headteacher, and with the capacity for further professional development. Duties will include contributing to the M.Sc. or Diploma courses in the Department, to short courses and school based consultancy to research and writing, within a very busy department.
Salary Range: £10,173-£11,954 (bar) - £12,816 (under review)
Application forms and further details from the Personnel Officer (Dept. T.E.), Sheffield City Polytechnic, Hallam House, Fitzalan Square, Sheffield S1 2BB, tel. 0742 20911. Completed forms to be returned by 13th June. Sheffield City Polytechnic is an Equal Opportunity Employer.

SHEFFIELD CITY POLYTECHNIC

DEPARTMENT OF EDUCATION MANAGEMENT
SENIOR LECTURER IN EDUCATION MANAGEMENT
The Polytechnic wishes to appoint a man or woman with recent successful experience as a Primary School Headteacher, and with the capacity for further professional development. Duties will include contributing to the M.Sc. or Diploma courses in the Department, to short courses and school based consultancy to research and writing, within a very busy department.
Salary Range: £10,173-£11,954 (bar) - £12,816 (under review)
Application forms and further details from the Personnel Officer (Dept. T.E.), Sheffield City Polytechnic, Hallam House, Fitzalan Square, Sheffield S1 2BB, tel. 0742 20911. Completed forms to be returned by 13th June. Sheffield City Polytechnic is an Equal Opportunity Employer.

SHEFFIELD CITY POLYTECHNIC

DEPARTMENT OF EDUCATION MANAGEMENT
SENIOR LECTURER IN EDUCATION MANAGEMENT
The Polytechnic wishes to appoint a man or woman with recent successful experience as a Primary School Headteacher, and with the capacity for further professional development. Duties will include contributing to the M.Sc. or Diploma courses in the Department, to short courses and school based consultancy to research and writing, within a very busy department.
Salary Range: £10,173-£11,954 (bar) - £12,816 (under review)
Application forms and further details from the Personnel Officer (Dept. T.E.), Sheffield City Polytechnic, Hallam House, Fitzalan Square, Sheffield S1 2BB, tel. 0742 20911. Completed forms to be returned by 13th June. Sheffield City Polytechnic is an Equal Opportunity Employer.

SHEFFIELD CITY POLYTECHNIC

DEPARTMENT OF EDUCATION MANAGEMENT
SENIOR LECTURER IN EDUCATION MANAGEMENT
The Polytechnic wishes to appoint a man or woman with recent successful experience as a Primary School Headteacher, and with the capacity for further professional development. Duties will include contributing to the M.Sc. or Diploma courses in the Department, to short courses and school based consultancy to research and writing, within a very busy department.
Salary Range: £10,173-£11,954 (bar) - £12,816 (under review)
Application forms and further details from the Personnel Officer (Dept. T.E.), Sheffield City Polytechnic, Hallam House, Fitzalan Square, Sheffield S1 2BB, tel. 0742 20911. Completed forms to be returned by 13th June. Sheffield City Polytechnic is an Equal Opportunity Employer.

SHEFFIELD CITY POLYTECHNIC

DEPARTMENT OF EDUCATION MANAGEMENT
SENIOR LECTURER IN EDUCATION MANAGEMENT
The Polytechnic wishes to appoint a man or woman with recent successful experience as a Primary School Headteacher, and with the capacity for further professional development. Duties will include contributing to the M.Sc. or Diploma courses in the Department, to short courses and school based consultancy to research and writing, within a very busy department.
Salary Range: £10,173-£11,954 (bar) - £12,816 (under review)
Application forms and further details from the Personnel Officer (Dept. T.E.), Sheffield City Polytechnic, Hallam House, Fitzalan Square, Sheffield S1 2BB, tel. 0742 20911. Completed forms to be returned by 13th June. Sheffield City Polytechnic is an Equal Opportunity Employer.

SHEFFIELD CITY POLYTECHNIC

DEPARTMENT OF EDUCATION MANAGEMENT
SENIOR LECTURER IN EDUCATION MANAGEMENT
The Polytechnic wishes to appoint a man or woman with recent successful experience as a Primary School Headteacher, and with the capacity for further professional development. Duties will include contributing to the M.Sc. or Diploma courses in the Department, to short courses and school based consultancy to research and writing, within a very busy department.
Salary Range: £10,173-£11,954 (bar) - £12,816 (under review)
Application forms and further details from the Personnel Officer (Dept. T.E.), Sheffield City Polytechnic, Hallam House, Fitzalan Square, Sheffield S1 2BB, tel. 0742 20911. Completed forms to be returned by 13th June. Sheffield City Polytechnic is an Equal Opportunity Employer.

SHEFFIELD CITY POLYTECHNIC

DEPARTMENT OF EDUCATION MANAGEMENT
SENIOR LECTURER IN EDUCATION MANAGEMENT
The Polytechnic wishes to appoint a man or woman with recent successful experience as a Primary School Headteacher, and with the capacity for further professional development. Duties will include contributing to the M.Sc. or Diploma courses in the Department, to short courses and school based consultancy to research and writing, within a very busy department.
Salary Range: £10,173-£11,954 (bar) - £12,816 (under review)
Application forms and further details from the Personnel Officer (Dept. T.E.), Sheffield City Polytechnic, Hallam House, Fitzalan Square, Sheffield S1 2BB, tel. 0742 20911. Completed forms to be returned by 13th June. Sheffield City Polytechnic is an Equal Opportunity Employer.

New horizons
The microcomputer, argues Nicky Skues,
offers new possibilities in terms
of educational practice

Faced with the inevitable arrival of a computer it seems most straightforward simply to try and integrate it into existing curricula, using software which replicates tried and tested teaching methods, or possibly, using it as a disciplinary tool. But the danger of using the micro to simulate the teacher is that its true potential may be ignored. What we must realize is that the computer offers new possibilities in terms of educational practice; in some sense we should be seeking a "problem to fit the solution" in that a new search for methods of educating the young (and old) must begin, based on the technological advances now on offer.

The rate at which educational programs are flowing into the system is gradually beginning to increase, but the opinions of classroom teachers seem to be that much of this software is either boring, badly written, or educationally unsound. Moreover, the programs often do nothing more than automate the most superficial aspects of classroom teaching: typical of such applications are standard maths tests or spelling tests, which essentially fail to go beyond the mere setting and marking of endless numbers of questions (although they may be attractively wrapped in packages of colorful displays and pretty tunes), and awarding scores or grades on the basis of a child's performance in the program.

The computer should not be used as an electronic tutor, which encourages its pupils/users to be passive and dependent recipients for the learning process, but as a tool to enable the learner to become a researcher and explorer in his or her self-directed pursuit of knowledge.

What, then, are the sorts of software which will use the resources of the computer effectively? First, a distinction may be made between "teacher-centred" and "child-centred" software: the former is modelled on the activities of the classroom teacher, employing ever more complex branching and looping strategies to programs which claim to be increasingly adaptive to the level of the child as assessed by the testing procedures contained within the program. "Child-centred" software respects children as learners and credits them with the ability and integrity to direct their own individual needs and interests.

Looking a little more closely at available software, it is possible to make a classification into six broad categories (here the focus is mainly on programs for the primary school):

- Arcade games
- Drill and practice, "programmed learning"
- Games of logic and skill
- Information storage/retrieval
- Simulations
- LOGO-like software.

Of these six categories the latter four are what we should be aiming to promote in schools. Arcade games (Space Invaders, Pacman, etc.) can be played virtually anywhere at anytime, and therefore whilst a case for their educational merit could perhaps be made out (speeding up reactions, or promoting coordinated motor activity) school does not seem to be a particularly appropriate place for them.

A great deal of the Computer Assisted Learning (CAL) software currently available (particularly for primary schools, and especially in the field of arithmetic) is essentially of the drill and practice variety, and there-

Elitec HOME & BUSINESS TECHNOLOGY

BBC Computers in stock Model B - £399

PROTECTIVE COVERS AND	EDUCATIONAL SOFTWARE ON CASSETTE
23.97	800001 ACORN/ST. THREE OF
24.48	800002 ACORN/ST. ALPHABET
24.99	800003 ACORN/ST. MATHS
25.00	800004 ACORN/ST. PIANO
25.00	800005 ACORN/ST. CHESS
25.00	800006 ACORN/ST. CHESS
25.00	800007 ACORN/ST. CHESS
25.00	800008 ACORN/ST. CHESS
25.00	800009 ACORN/ST. CHESS
25.00	800010 ACORN/ST. CHESS
25.00	800011 ACORN/ST. CHESS
25.00	800012 ACORN/ST. CHESS
25.00	800013 ACORN/ST. CHESS
25.00	800014 ACORN/ST. CHESS
25.00	800015 ACORN/ST. CHESS
25.00	800016 ACORN/ST. CHESS
25.00	800017 ACORN/ST. CHESS
25.00	800018 ACORN/ST. CHESS
25.00	800019 ACORN/ST. CHESS
25.00	800020 ACORN/ST. CHESS
25.00	800021 ACORN/ST. CHESS
25.00	800022 ACORN/ST. CHESS
25.00	800023 ACORN/ST. CHESS
25.00	800024 ACORN/ST. CHESS
25.00	800025 ACORN/ST. CHESS
25.00	800026 ACORN/ST. CHESS
25.00	800027 ACORN/ST. CHESS
25.00	800028 ACORN/ST. CHESS
25.00	800029 ACORN/ST. CHESS
25.00	800030 ACORN/ST. CHESS
25.00	800031 ACORN/ST. CHESS
25.00	800032 ACORN/ST. CHESS
25.00	800033 ACORN/ST. CHESS
25.00	800034 ACORN/ST. CHESS
25.00	800035 ACORN/ST. CHESS
25.00	800036 ACORN/ST. CHESS
25.00	800037 ACORN/ST. CHESS
25.00	800038 ACORN/ST. CHESS
25.00	800039 ACORN/ST. CHESS
25.00	800040 ACORN/ST. CHESS
25.00	800041 ACORN/ST. CHESS
25.00	800042 ACORN/ST. CHESS
25.00	800043 ACORN/ST. CHESS
25.00	800044 ACORN/ST. CHESS
25.00	800045 ACORN/ST. CHESS
25.00	800046 ACORN/ST. CHESS
25.00	800047 ACORN/ST. CHESS
25.00	800048 ACORN/ST. CHESS
25.00	800049 ACORN/ST. CHESS
25.00	800050 ACORN/ST. CHESS
25.00	800051 ACORN/ST. CHESS
25.00	800052 ACORN/ST. CHESS
25.00	800053 ACORN/ST. CHESS
25.00	800054 ACORN/ST. CHESS
25.00	800055 ACORN/ST. CHESS
25.00	800056 ACORN/ST. CHESS
25.00	800057 ACORN/ST. CHESS
25.00	800058 ACORN/ST. CHESS</

EXTRA

continued from previous page

tional criticisms levelled at drill and practice programs there is a further aspect to consider. The use of highly structured programs fosters a certain degree of "machine dependence": the notion that the computer is some sort of superior being in possession of all the relevant knowledge. The fact that the computer has all the answers and is the sole authority on what is "right" or "wrong", dealing out rewards or penalties as appropriate, cannot fail to create a distorted view of the powers, capabilities, and uses of this new technology.

Games of logic or skill include programs such as *Hunt The Thimble* which requires the planning of efficient search strategies to find the thimble secretly hidden by the computer; or *Grungy Towers* which involves solving a murder mystery (as in the game *Cluedo*). Through using these programs children acquire training in systematic and logical thought. The educational relevance of such programs rests on the assumption that these thinking skills are transferable to a variety of other learning situations: whether they are or not is difficult to assess, but in any case this sort of software can offer further benefits on the social side.

Where children work together at the computer (the demands of such games programs often dictate that this should be the mode of operation) they are learning communication and other social skills. They must cooperate with each other as a team; they exchange ideas and learn to respect and consider the views of their peers; and they must learn to communicate effectively with one another. Teachers have commented on the power of the computer to encourage these collaborative and discursive activities among children; research in computer education has also highlighted the advantages of computer use in this respect.

A major strength of the computer is its ability to store and handle large quantities of information. To use it micro for this purpose is therefore to tap its unique resources. Examples of programs which use these informa-

tion-processing families are *Factfile*, *Microquery*, and *Animal*. The first two allow the user to create a "file" of information on any chosen topic and recall the information in various ways; the third effects file creation through the posing of carefully constructed questions by the user.

The computer here is being used in a way not readily duplicated by other conventional means, and the child takes a less passive role than that demanded by drill and practice type software. An individual child is offered the opportunity to draw on and expand a particular fund of knowledge related to his or her own personal interests, and is at the same time receiving the important message that the computer only knows what you tell it.

Simulations again provide an opportunity of utilizing the micro in a novel way and enable children to explore various situations freely, from planning road systems to reliving historical events or studying river pollution. In an effective simulation program children progress down a path of discovery, answering their own questions of "What would happen if...?", thus engaging in a process of active learning.

Seymour Papert, (the originator of the programming language Logo), however, claims that even simulations are just further manifestations of the computer programming the child syndrome. They tend to be over-simplified and the student will only discover what the program designer has previously determined will be discovered. This seems a harsh criticism: simulations can provide useful learning experiences, giving practice in forming and testing hypotheses.

Before moving on to discuss Logo, there is a further point to consider concerning the evaluation of educational software. The discussion so far has centred on the various styles of the programs available, but it is also important to cast a critical eye over their content. Many educational program designers, in seeking to emulate the successes of arcade type software, have based their games on warfare or



one sort or another. Simulations do not necessarily escape criticism, either - do we wish to convey the values implicit in the definition of "success" as being the indiscriminate accumulation of wealth, power and capital?

The work of Seymour Papert using turtles is becoming more and more widely known as the programming language Logo gradually infiltrates school classrooms. In this application of the micro the child is truly "programming the computer" rather than vice-versa. The language Logo is used to drive a turtle (a small robot) employing commands such as FORWARD, BACKWARD, LEFT, and RIGHT. The child, therefore, is in control and appropriates mathematical knowledge through his or her explorations of the turtle's movements. (Logo is largely used at present in the field of geometry, although in its complete implementation it can support the full complement of programming applications.)

Turtle programming allows cognitive development to take place in an environment where the child is the free agent of his or her own learning. Papert subscribes to the Piagetian notion that a child learns by actively exploring the world around him or her, and sees the learner as a model builder, constructing and refining models of reality on the basis of his or her exploratory experiences. The advantages of a turtle environment, are that it constitutes a "micro-world" where the salient features are easily isolated and hence more easily incorporated into the mental model being constructed; and further, the knowledge acquired relates directly to the child's own "body knowledge" or sensorimotor schemata, which thus facilitates understanding.

The commands of Logo may be successively built up into quite complex sequences and therefore the range of possibilities for action is practically limitless. Emphasis is placed on the construction of a solution to a self-generated problem, and in contrast to the closely directed problem solving which so frequently features in conventional classroom situations, there are no "right" answers. Errors or "bugs" are all part and parcel of the solution process, which allows children to adopt a more constructive attitude towards mistakes.

Clearly the philosophy of Logo is

a new direction in educational practice: it represents a major departure from conventional teaching methods in that it transfers much of the control of a learning situation to the learner, rather than placing the student in the hands of a teacher who then prescribes a set course. This is not to say that teachers will become redundant: rather that their role will have to be altered to one of supportive guidance instead of immutable authority.

This should not sound too alarming: we are all witness to the results of such self-motivated knowledge acquisition when we observe the development of speech in young children - they are not taught, but merely placed in a favourable environment and given encouragement and occasional guidance. The rest children do for themselves. With the advent of the micro-computer we are now in a position to provide suitable learning environments for other areas of knowledge.

Special consideration should, of course, be given to the place of the computer in the education of the physically and mentally handicapped, since these children are in a position to derive particular benefits from the new technology. The crucial advantage of the computer here is as an extension of the handicapped child's communication system and his or her ability to interact with the physical world.

Anyone who saw the Horizon programme, *Let's Talk Turtle* (BBC, Feb. 14th, 1983), will have seen clearly demonstrated the pleasure of severely handicapped children in being able to move and predict the movements of their floor turtle via a simplified keyboard - the lack of coordination of their own hand and body movements had previously denied them access to such powerful and precise control of objects. That children need to manipulate the physical world around them to build up concepts is beyond doubt, but for these children such experiences are hard to provide. Similarly, new possibilities for handicapped children to create their own pictures and designs are opened up via the "screen turtle" of Logo.

Nor do computers only help the physically handicapped; the Artificial Intelligence Unit at Edinburgh University documents the case of an autistic child whose communications to other people were finally prompted by a desire to tell of the turtle's movements. A dyslexic 11-year-old boy showed marked improvements in

general abilities and progressed from being the class "clown" to developing a great deal of self-confidence through using the computer. Numerous other such instances doubtless exist - they are as yet isolated cases, but ones which can contribute to the growing body of evidence of the uncanny power of the computer to penetrate and captivate the minds of handicapped, maladjusted, or difficult (and normal) children.

In summary, then, serious thought needs to be given to the direction in which we are heading in the educational world of the microcomputer. It must be realized that drill and practice software and programmed learning techniques have flourished so far only because they lend themselves so readily to automation on the computer.

Minor benefits may accrue to remedial pupils, but even here we may question the nature of these benefits - do the pupils merely progress to being able to complete a page of examples quicker or more accurately? If so, it is debatable whether the gains are worth the sophisticated machinery required to achieve them. Moreover, many sorts of CAL programs encourage a convergent, passive approach to knowledge, where "right" answers gain the rewards, and creative or divergent thinking is treated as "wrong".

The theoretical basis of drill and practice programs runs contrary to emerging psychological theories which take a broader view of knowledge acquisition. Children acquire language with no formal teaching, and this fact serves as an indication that the process could be replicated in other fields of learning. This view pervades the work of Papert in his efforts to "restructure" bodies of knowledge so that they may be absorbed as effortlessly as the child absorbs the foundations of speech and language. Logo claims to serve this purpose in the field of mathematics (although as a complete programming language it also has many other applications).

It is therefore clear that while we should be welcoming the entry of computers into our primary classrooms we should also be thinking carefully about the best ways to use them. Emphasis should be on the child-centred rather than the teacher-centred software; and care must be taken not to under-use this sophisticated machinery at our disposal. It would be a shame to let this opportunity to exploit a significant technological innovation in our schools slip by through ignorance of how to use it effectively.

Prime Computer announces Assistance for Education

Prime Computer is offering substantial allowances towards the cost of providing super mini-computer systems for Education in the United Kingdom.

The scheme is designed to promote the teaching of computer science and student awareness of computer applications.

- Powerful 32-bit Super mini-computers
- Proven in Education
- Substantial discounts on Prime hardware and software
- Leasing

EDUCATION SUPPORT PROGRAMME

Entry-level systems for teaching purposes in all non-profit Educational Establishments.

EDUCATION ALLOWANCE PROGRAMME

Large allowances against purchase of complete systems for teaching of 3 and 4 year degree courses.

EDUCATION DISCOUNT PROGRAMME

Standard schedule of discounts for all non-profit Educational Establishments

COMMUNICATIONS SOFTWARE FOR OPEN SYSTEMS INTERCONNECTED

Available late 1983 in co-operation with the University of Salford - 'Coloured Book' - communications software for Open Systems Interconnection.



A Prime 2250 Education Support Programme system



THE PRIME EDUCATION PROGRAMME

Write for the Prime Education Programme brochure to:
Malcolm Hoar
Prime Computer (UK) Limited
6 Lampton Road
Hounslow, Middlesex TW3 1JL

PRIME

ARNOLD-WHEATON

Both authors are experienced computing teachers and it shows

Introduction to Computer Studies

P. GRADDOCK and A. R. HASKINS

Published by Arnold-Wheaton Software

ISBN 0 85002 5 53 50

Available July

ARNOLD-WHEATON SOFTWARE

FOR PRIMARY AND SECONDARY SCHOOLS

Covering Maths, Environmental Studies, Sciences and Language Development

Programs now available for

Apple, BBC, Research Machines and Spectrum

To Arnold-Wheaton Software, Dept. E J Arnold & Son

Lincoln, Notts, LE11 1SY (no stamp needed in the UK)

Please send me an inspection copy of

INTRODUCTION TO COMPUTER STUDIES 008-025002-5 £3.50

Please send me software information and order form

BLOCK CAPITALS, PLEASE

NAME: _____

SCHOOL: _____

ADDRESS: _____

T.E.A. _____

Computer Books from Pitman...

NEW **Preparing for Computers**
by John Shelley Publication 1982
An elementary introduction to computing suitable for CSE and the new CEE Computer studies syllabus.
"You are strongly urged to take a look!" Education Equipment
Paper/120pp/ISBN 0 273 01845 0/£4.50

Computer Studies: A First Course
by John Shelley & Roger Hunt Publication 1980
A best-selling treatment of the subject for GCE 'O' level students, and also for appreciation courses.
"This is definitely one of the better computing textbooks around!" Education Equipment
Paper/240pp/ISBN 0 273 01272 X/£4.95

Computer Software for Schools
by A Payne, S Hutchings & P Ayre Publication 1980
Exercises and simulations are drawn from a variety of school disciplines and activities.
"The case studies are practically faultless... A most unusual and brilliant book!" Education Equipment
Paper/272pp/ISBN 0 273 01583 4/£12.95

NEW **Microcomputers and School Physics**
by D L Thompson Publication 1982
The first in a new series of books showing how micros can be used as an integral part of teaching in schools - provides teachers with the knowledge to use micros in a sensible, interesting and effective way.
Paper/112pp/ISBN 0 273 01843 4/£6.95

COMING SOON **Microcomputers and School Biology**
by A & H Lewis Publication September 1983
Paper/192pp/ISBN 0 273 01903 1/£8.95

COMING SOON **Microcomputers and School Chemistry**
by C & H Diney Publication early 1984
Paper/156pp/ISBN 0 273 01862 1/£6.95

Order from your local supplier. Inspection copies, and our Computing and Science catalogue, from Pitman Books, 125 Lang Ave, London WC2E 9AN.

Pitman Books

THREE QUESTIONS ON SCHOOL ADMINISTRATION

- Is your timetable the best possible one? Or is it the first one?
Keith Johnson. They will build a complete timetable either interactively or automatically. So now you can settle for the best, not just the first.
- Do you use your school examination results fully?
You now have to publish your examination results. And the new Examination Results Programs (also by Keith Johnson) will give you great flexibility in presenting them for publication. They will enable you to analyse entry policy, look at the comparative performance of departments and allow you to make the best managerial use of the information they yield.
- How much time do you waste collecting and collating examination entries?
A new suite of 8 Examination Entry Programs by Peter Rhodes will save time for everyone involved. They produce lists for teachers to mark up, collate the information and present the final result for immediate transcription onto the examination boards entry form.

Send for more information now. These programs will be available this summer.

Name..... School.....

Address.....

To: Clare Wileman, Hutchinson Software, Freeport 5, London W1E 4QZ. (No stamp needed.)



Hutchinson Software

FORTHCOMING COMPUTER FEATURES

The next pull-out Extra on Computers in Education will be appearing in the Times Educational Supplement on 4th November.

In addition to regular Extra features, the TES is now featuring a monthly Software Page, on the first Friday of each month.

To advertise in the Extra, or on the Software Page, please telephone 01-263 3000, Ext. 223.

Cultural bias

Michael Turnbull argues for a dose of positive discrimination in favour of computing in the humanities

The most neglected area at present in computer software is in arts subjects at secondary and especially further education level. At primary level considerable work has been done by the Microelectronics Education Programme in England and Wales, and in Scotland the Consultative Committee on the Curriculum is supporting a number of initiatives aimed at meeting the software needs of primary teachers, and local authorities are also initiating developments. There is still a great deal of work to be done to make computers an accepted and fully functional part of the primary curriculum, but this sector has the advantage of not operating the kind of curriculum used by secondary schools or further education centres where rigid subject divisions apply. In the primary school each of the three R's receives equal recognition and support.

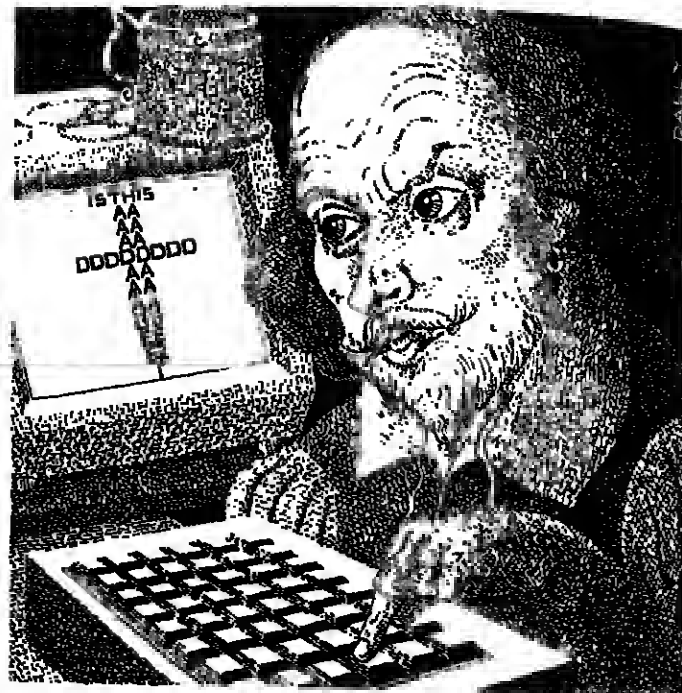
In secondary schools and in further education (and for that matter, in universities), the computer is largely the handmaid of science and mathematics and the way computer programming is taught is shot through with the concerns of those particular subjects. For the Arts graduate the computer is a foreign body. Computing is still largely the province of the scientific and technological half of the Two Cultures. There is a strong case for a large dose of positive discrimination in favour of the humanities.

Recently the Capital Region Information Centre of the Microelectronics Education Programme issued an information sheet *English and Language Teaching using Microcomputers*. A number of people are already involved in work on the teaching of English and Modern Languages using computers, among them Derek Schirra, Director of Computer Studies, London On-Line Authorities is interested in obtaining funds to organize a project to use the IBM interactive instructional system "English Communication Skills Version II". The project would be involved with ethnic groups and underprivileged people.

Mike Sharples of the Department of Artificial Intelligence, Edinburgh University is researching into computers and language teaching and has written a paper *Computing Based Teaching Scheme for Creative Writing*. For Modern Languages teachers Graham Davies and David Steel of the School of Language Studies, Belling College of Higher Education issue a newsletter called *Callboard* which acts as a vehicle for disseminating information about ideas and activities in the field of computer assisted language learning.

At Flegg High School, Marham, Great Yarmouth, G Hewitt and D. Moore have developed a suite of programs to improve reading standards and spelling, while Daniel Chandler is developing an interest in the use of micros in English teaching as coordinator of the "Micros and English" group for the Schools Council Computer in the Curriculum Project, based at Chelsea College.

Work done in this field at university level is also steadily increasing. At the School of Modern Languages of the University of East Anglia, J Fox is



working in the area of Computer Assisted Learning for Special Purposes. Dr J L Dawson acts as a point of reference within the Literary and Linguistic Computing Centre of Cambridge University where he is the Secretary of the LLCC.

In Dundee, Professor R. W. Leat of the Modern Language Department is involved in on-going development as a member of a specialist CAL group. John Higgins of the English Language Research Department of Birmingham University has written material relating to the use of the computer in EFL teaching and computer assisted language learning.

Local authority involvement in this area is increasing: five teachers from ILEA have been seconded for one day a week until September 1983 to work on computers and English teaching with the Computers in the Curriculum Project. They are to investigate work existing at present and to develop suitable software for use within English teaching.

As far as papers on the subject of the use of computers in English and Modern Languages is concerned, there appear to be only two research workers who have published the results of their work: T F John, based at the University of Birmingham, English for Overseas Students Unit, and John Higgins of the English Language Research Department, the University of Birmingham. A third contributor to the debate is G Davies of the School of Language Studies at Belling College of Higher Education. Both Higgins and John have produced a number of software packages for a variety of machines.

CAL programs by John Higgins include ones on Cloze Procedure, Dialogue Generators, Simulations, exercises in the synthesis of given information and an adaptive guessing game. Tim Johns covers the same kind of learning processes with a suite of programs in which the computer records randomly accessed text to make three games, a spelling trainer, Hangman, and a program which demonstrates the main ways of telling the time in English.

In the main the software produced for language teaching tends to be based on developing the most basic of skills: spelling, the fundamentals of grammar. Whether this is in the form of programs for early education as in those for the BBC or the Text Instruments TI-99/4A, or in a TEFL format, there still remains a considerable gap in provision. Atari market

cassettes for learning French, German, Italian and Spanish and Commodore offer programs in English Language for the VIC-20. That apart, there do not seem to be many programs in existence which take the learner beyond the most basic level.

Considerable scope now exists for developing programs in English language for pupils from the upper primary level to the sixth year. In addition the very wide number of courses in communication and writing run by the Business Education Council, SCOTBEC and the City and Guilds London Institute provide an opportunity for computer assisted learning to present and reinforce language skills by showing, for example, how to write different types of letter, how to write a report, a memorandum, a summary.

Here there would be an overlap with the language work in O Level and A Level and Higher English. With the advent of modularization as a cross-reference between examinations of a similar type are increasingly made, the usefulness of CAL in English language should become apparent.

In the teaching of literature there is no reason why normally abstract concepts such as verse technique could not be displayed and taught by the use of the computer which would present the information in a more easily understood form. Using the word processing facility of the computer, essay writing technique could be improved by, for example, showing how to make an essay-plan and (the reverse) how to summarize a passage. Facts about literary figures could also be presented, as they could be in the teaching of history, where bullet-point tables of population or balance of payments or boundary changes would allow the student to use the computer to work at his own speed. Provided the programs are well-designed the computer can be a very potent tool in the teaching of language and languages where the repetitive parts of drill in vocabulary or conversations could be explored as well as the niceties of grammar.

One fundamental difficulty is the incompatibility of machines and the programs written for them. However, this is a problem which will be overcome as it is beginning to be overcome in videocassette formats. More important is for teachers working in the humanities to get to grips with the computer and to begin to make it an integral part of their teaching presentation.

A survey suggested that there were no courses which could be used for all pupils of both sexes across the ability range. Dick Orton, deputy director of CLEAPSE, was therefore asked to develop a course in this area.

The course is intended for all third year pupils and as it lasts only six to eight hours it can be slotted into the curriculum. Because many teachers have little knowledge of electronics, Mr Orton decided that a highly structured course was needed. He suggested the kind of equipment he thought appropriate to suppliers and several responses.

A set of teachers' notes and pupil work cards is now available. The course - called "Microcomputers and the Arts" - leads from the simple concepts of digital codes and memory to the concept of the "microprogram" microprocessor system. CLEAPSE Development Group, Brunel University, Uxbridge, Middlesex, UB8 3PH.

Goldmines and minefields

Jaquetta Megarry surveys new software for primary schools

Educational software publishing is a potential minefield - but publishers and purchasers see different mines. Publishers must make a profit to survive. Ideally, many might like to publish ingenious, well-filled software packages costing £30 to £90; but if they did, the goldmine would be dug not by them but by software pirates who would inevitably defeat any "copy-proof protection" in the end.

On the other hand, if software is too cheap, there is not enough margin to finance proper development work and documentation. If programs are too simple, teachers may develop their own instead. If the topic or treatment



is not novel or "neat", it will not attract interest - but if it is too different it may be seen as peripheral to the curriculum or idiosyncratic in its approach.

The teacher sees these dilemmas from the other end of the telescope; when computer software has to compete with more familiar and less troublesome resources within a tight budget, you need a powerful incentive to buy software sight unseen, on the basis of a sketchy catalogue description. Some efforts are being made to get around this problem: Longman are staging a programme of demonstrations in teachers' centres, and Ginn will supply free teachers' notes for evaluation.

Nevertheless, in general, software publishers refuse to lend inspection copies to teachers or even review copies to journalists. Although their concern about piracy is understandable, this could be a short-sighted policy. One result is that the comments below are based on publishers' information or fleeting glimpses at exhibitions, rather than systematic personal testing of the software, with the honourable exceptions of Micro Primer (the MEP/Tecmedia packs) and Ladybird/Longman.

In surveying the whole confusing field, only two trends are clear: ● As software packs begin to proliferate, there is an urgent need for bibliographic control. As a stop-gap, publishers would only agree on a standard method of showing the source, system requirements (make and model, size of RAM, operating system, disc/cassette, etc), age level and subject matter, it would help enormously. An extended version of the ISBN system and British Library Cataloguing in Publication Data coding is the obvious solution.

● Publication dates in catalogues should generally be viewed as absurdly optimistic; they more often reflect hopes than promises of availability. Several publishers who refused review copies did so on the grounds that the draft versions were nowhere near ready for outside scrutiny. To adhere to the announced publication dates of May or June, they will need a quite incredible sprint in the last lap. Any pilot testing in schools, such as Micro-Primer and Ladybird/Longman have conducted, seems out of the question on such schedules.

These generalizations apart, every thing else is confused. Different publishers are entering the primary market selectively and with different pricing approaches. There is no agreed short-list of machines catered for, although nearly all of them include the BBC Model B and Research Machines 127. It is hard to see any consensus on whether to cater for disc

systems as well as cassette; there is a general shortage of disc software. Micro Primer software is available for the three Dol-supported microas (BBC, RML 480Z and Sinclair Spectrum) on cassette, though the documentation caters for disc as well. The four double-cassette packs cost £18 each (or £9 at the UK educational subsidized price).

Ginn have announced a sizeable software list, with most programs available on cassette for BBC and Spectrum and some also on Apple (disc) and Pet (cassette). The Mary Rose is a recent release (BBC and Spectrum only) at £32.50 for a fairly complex archaeological/diving simulation. Forthcoming releases include Saggers, based on one of the most important archaeological sites in Egypt.

Like the Mary Rose, Saggers was featured on Bob Salkeld's recent *Micros in the Classroom* (television programme, where both programs seemed to fire the imagination, at least in the hands of highly committed teachers. However, Kid-In-School, in which nine-year-olds simulate the management of a riding school seems unnecessarily restricted in its appeal, surely remote from the experience of inner-city children?

Longman are producing some of their upper primary software on disc and cassette for BBC, RML and Pet. Some programs are also available for Apple on disc. However, Ladybird/Longman (the main primary imprint) are producing software only as cassettes for BBC at present. Nelson's Peak Mathematics software will consist of five packages (Directions, Angles, Bearings, Graphs, Time), each containing one to three cassettes for the BBC and 480Z micros.

As part of the book publishers, most of whom are newcomers to the primary software field, there is even greater diversity of marketing choices among the many small software firms recently set up by teachers and lecturers. ASK (started by Tom Stonier of Bradford University, with Mike Thorne as its Consulting Editor) has produced a selective range of programs for three-year-olds and upwards. Their range has just extended from the VIC 20 and Dragon to include the BBC machines (£9.95 per cassette).

Camsort, founded by Graham Davies of Ealing College of Higher Education, specializes in secondary language programs and authoring packages using the Pet and VIC 20.



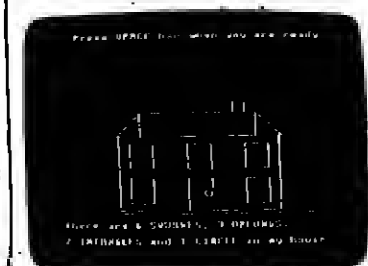
Their list also includes "Three R's" packages for primary: 11 programs for the Pet (£15 on disc or cassette) and seven for the VIC (£10 cassette). These cover such topics as Fletcher fractions, the inevitable tables theme (with variations) and "Gap-filler templates" which enable non-specialist teachers to create gap-filling and Cloze tests. They also market a dubious title "language called Kidstuff for the Pet, which they describe as LOGO-like."

Copy Write is an example of a Camsort authoring package. Based on an idea of John Higgins, it allows the teacher to create a short story which the pupil first reads, then has to reconstruct on a screen blink except for punctuation marks. Words are filled in Hangman-style wherever they occur. This makes an interesting contrast with Tray (see Resources page, TES of 29.4.83).

Most publishers seem to be hedging their bets about whether to go for

basics or specialized topics. There are 57 ways to disguise arithmetic testing as a game and make it more palatable; all are useful in small doses, most do little to diagnose or remedy errors. Micro Primer uses animated and chugging blue and green trains to motivate numberwork, whereas Ladybird/Longman use a schematic Rally course, with the driver's fuel supply depending on correct answers. This works well at the lower of the eight skill levels, though I question the wisdom of insisting that answers to long multiplication or complex addition should be entered from left to right. Work cards related to real-life rally driving provide a link to topic work.

Another Micro Primer program, Cat and Mouse, tests and practices number and keyboard skills. The mouse's chance of escape depends on speed and accuracy in answering, with "slow mouse" setting the highest difficulty level. The combination of animation and gratifying sound effects make this an effective motivator. As it would adapt easily to any basic skill, it would be useful if the notes explained how to go about this.

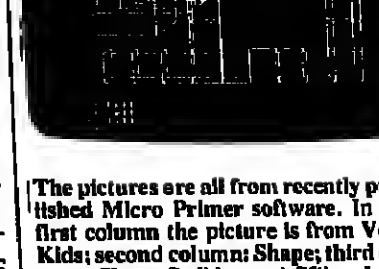


In the same pack, the old favourite of shooting bricks out of a wall is set to work in Brick Up, a vocabulary and dictionary game. The notes on how to modify this one are excellent, and many teachers will want to act on them. Only a warning against using upper case letters is missing.

My favourite, however, was Build, a graphics tool-kit which allows effortless manipulation of cubes and produces powerful illusions of three-dimensional perspective. If they follow up with a similar approach to cylinders, primary-age children could doodle with quite complex building designs. This tool-kit approach could be a step on the road pointing away from teacher-proof packages.

Sources

ASK London House, 42 Upper Richmond Road West, London SW14 8DD.
Camsort: 10, Wheatfield Close, Maidenhead, Berkshire, SL6 3PS.
Longmans (for Ladybird/Longman, ITMA, Computers in the Curriculum): Geoff Gallagher, Longman Group Resources Unit, 33-35 Tanner Row, York YO1 1JP.
Nelson (for Peak Mathematics software): Nelson House, Mayfield Road, Walton-on-Thames, Surrey, KT12 5PL.
Tecmedia (for Micro Primer software): 5, Grenby Street, Loughborough, Leics LE11 3DU.



The pictures are all from recently published Micro Primer software. In the first column the picture is from Venn Kids; second column: Shape; third column: Shape Builder and fifth column: Time and Build. The software is available from Tecmedia and is produced under the sponsorship of the Microelectronics Education Programme.

Cambridge Educational answers today's challenge with exciting books and software that develop fully the possibilities of the microcomputer in education today

Cambridge Micro Software

Seven packages developed by the Netherhall Software Group and supported by the Microelectronics Education Programme

- ★ skilfully produced, imaginative graphics that use sophisticated programs and colour
- ★ designed to tackle and amplify key areas of the curriculum
- ★ designed by practising teachers for effective classroom use, with the needs of pupils and teachers directly in mind
- ★ full, clear documentation, including reproducible worksheets and suggestions for classroom organisation

Introducing Map Skills 1 and 2
Moving Molecules
Population Growth
Maths Topics 1 Balance Your Diet
Watts in Your Home
All available July 1983.
Each cassette package (for the BBC Microcomputer model B) about £13.00 + VAT
BBC Discs and RML 380Z versions in preparation.

A Child's Guide to the BBC Micro

John Dewhurst

This new guide to programming the BBC Micro is designed specially for children from age seven upwards, and is the only book yet published aimed at this audience. Its simplicity and straightforwardness make it an excellent introduction to programming in BBC BASIC.

- ★ text is interspersed with several friendly cartoon characters, to guide the child through the material
- ★ catchy rhymes help the user remember important points
- ★ there are also pictures of the screen displays, 'You Try' and 'Make a Note' sections.

The book has a humorous, encouraging approach and plenty of project ideas and suggestions for the children to develop. Publication July 1983

In preparation:
A Child's Guide to the Sinclair ZX Spectrum
John Dewhurst and Rosemary Tennison
Teachers!
For a Cambridge Micro Software order form and an inspection copy of *A Child's Guide to the BBC Micro* write to Rosalind Horton at the address below.

CAMBRIDGE UNIVERSITY PRESS
The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU, England

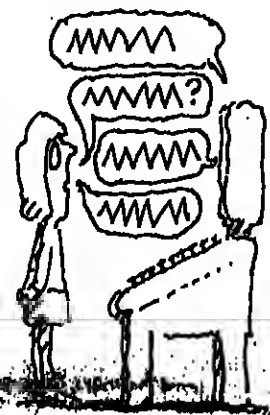
EXTRA

Word perfect?

Tony Gray on developments in speech synthesis

In the student union building at Loughborough University there is a pinball machine. The game is related to the Flash Gordon story, and every half minute or so the machine starts bytanders with the threat, "Emperor Ming awaits!" The new Maestro has a talking dashboard. The age of commonplace talking computers has arrived, and the next few years will see them in our classrooms.

In a perfect world, artificially produced speech would be high fidelity and as easily understood as the original. Unfortunately technical problems of generating high quality synthesized speech with a school micro make it necessary to differentiate that which may be understandable in general terms from that which must be precisely intelligible. Put simply, the choice at present is between unlimited vocabulary which is only understandable, and a limited specialized selection of words and sounds with high intelligibility and natural cadence. This enforced distinction is useful



because it makes us examine the applications we have in mind, and consider the nature of the required spoken output. I believe that speech required of an educational computer system falls into two general categories: that which prompts or motivates the learner, and that which carries precise didactic content. Examining an application should therefore enable decisions to be made about quality, extent of vocabulary and value for money.

Using speech as a prompt is the most common and the least specialized application. Here, the speech is intended to inform or elicit a response. The program might say, "Would you like to try again?" or "Well done! Here's another to try..."

In these circumstances it is only important that the speech is understandable and since meaning can be

gleaned from context, the quality of the speech need not be high. Selective visual prompts can be used to reinforce some messages.

One problem with number programs concerns reading level. With some children there is no difficulty - number, reading and language skills develop hand in hand. But sometimes there is a mismatch. For example, a mature reader may have good computational and problem-solving skills. Alternatively, a program may offer number work at the correct level for young children, which requires a reading age about 9.0 for satisfactory use.

These problems can be overcome by using speech as the prime interactive medium within the program, enhancing written messages or being used to reward, explain or encourage. This application of speech does not require high quality and some schools have already tried barely understandable speech systems because they see the potential. For children with special educational needs, spoken output may be particularly important.

For other applications, the speech needs to be intelligible and natural. This is because speech which has a didactic role must convey its precise content, and not merely general meaning. Reading programs, for example, can still only address the graphic aspects of the reading process. Satisfactory software intended to help children establish the important grapheme/phoneme relationship cannot be written because speech output of sufficiently high quality is not yet available.

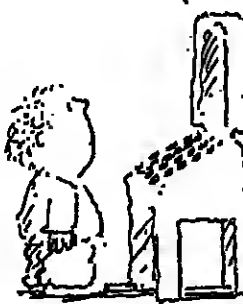
To help pupils develop and practise early reading skills, it may be necessary for the system to speak a set of blends and digraphs as examples for the pupil to learn. If these are of poor quality, the learner will have a poor model to work with, and will suffer accordingly.

Another example concerns the application of synthesized speech in the field of multi-cultural education. Some Asian people are having problems learning English, and many of them are not literate in their mother-tongue either. It is not practical to offer long-term personal tuition, since resources are scarce.

This is a classic application for computer-aided learning (CAL). A microcomputer with prompt speech in the mother-tongue and the didactic speech in English could radically improve the lot of both tutor and student. The application of such a system to teaching foreign languages is obvious.

All the examples given in this article could be put into action now. For example, work is under way at Loughborough which concerns using speech systems in the field of early reading development. However, such specialized applications and those like the

Take me to your leader



EFL example, require very particular word and sound sets, appropriate software and a programme of evaluation to assess the effectiveness of the materials and teaching methods.

Equally, there is a need to develop our general understanding of CAL. Educational software which indiscriminately uses the full power of the microcomputer can be counterproductive. An unconsidered cascade of graphics, text, sound and speech may be confusing. It is much better to use precise use of these elements to emphasize particular points, or to draw attention to graphic information. This is particularly true of software used by children.

Such work costs money, and while funding for technical development is available (largely because it is a easily identifiable area) funding for applications research is less easy to find. Hardware, software, and classroom practice all need work, but the spread of interests cuts across the boundaries of the funding bodies. SERC, DOI, DES, MEP and other commercial companies. No single source can commit itself to supporting the necessary inquiries.

Of course, this work will be done eventually. It must if we are to utilize the technology in our schools effectively. It is hoped that, unlike some recent initiatives, we examine the impact of this equipment thoroughly before it turns up in our schools.



Micros in English

by Carolyn O'Grady

Exploring English with Microcomputers is the first in a series of MEP Readers published and distributed by the Microelectronics Education Programme and the Council for Educational Technology. Edited by Daniel Chandler, English Coordinator of the Computer in the Curriculum Project at Chelsea College, University of London, it contains articles on subjects including "Why English teachers should use the computer", "Computers: awareness and creative English - mission impossible?", "Does the use of the microcomputer inhibit the development of language in children?", "English teaching and computer-aided simulations", and "The English teacher and the programmer: how can they talk together?"

The booklet sets out to sample the range of existing investigations into some of the possibilities of the microcomputer, which have relevance to

English teachers. In his introduction Daniel Chandler looks briefly at some of the possible uses of the computer in English: as a word processor, to encourage talk and collaborative activities, "It is in both creating opportunities for and adding purpose to informal group discussion that the microcomputer can play a part" - and for simulation exercises. He draws attention to the shortage of software in this area, which he attributes in part to the fact that too few English teachers are involved in local program development groups.

This situation, he says, may well change rapidly within only a year or two, as the available software reaches what has been described as "the critical mass" required to designate an area of ideas. The book is available from CBT, 3 Devonshire Street, London W1N 2BA and costs £4.

EXTRA

On-line to SIR

Hugh Pinnock on the British Library's Schools Information Retrieval system

The Research and Development Department of the British Library funds research and development projects, and the results will benefit library and information systems, and their users. Clearly, research of this kind is only useful if it coincides with efforts both to make users more aware of these resources, and to give practical experience of them.

So the Department has always given priority to better education for information use. This began in the early 1970s with the higher education sector and then the emphasis shifted to schools, with a series of projects intended to increase awareness of the vital importance of information skills, and to encourage their incorporation into the curriculum.

This process culminated in the Sfr (Schools Information Retrieval) Project, in 1979. It was a time when the emergence of cheap and powerful microcomputers made it urgent that schools had access to good information retrieval software, and to the freely available experience of those who had used it.

In planning the Sfr project, we rejected the approach used earlier in the experimental introduction of on-line information services into public libraries. Then, we lent terminals to the libraries and provided each with £1,000 towards the cost of searching commercially-available on-line systems. This seemed too big an undertaking, likely to fail in most schools, where experience with major computer systems was very limited.

The Sfr system was designed to mirror the commercial retrieval systems which the pupils would eventually encounter, but in a form appropriate for use in schools. Between September 1980 and September 1982, the Sfr programs were written, tested, and tried in five secondary schools and one further education college.

The software ran on the Research Machines Ltd 380 Z microcomputer

and was used to retrieve information needed for project work, essays, etc, thereby demonstrating the principles of computerized information handling. A full account of the Sfr project will appear in the final report, but I would like to concentrate on the software itself and what it offers schools.

The Sfr software package is written in a compiled version of BASIC and consists of two separate program suites:

● the editing or database creation programs, which allow teachers and pupils to add their own information to the system by inputting new records (either to an existing file or to a new one); to amend or delete records; and to create an inverted file, or index, to the database.

● the search programs, which allow the interrogation of any database for which an index has been created.

The minimum configuration required to run SIR is 32K internal memory with dual double-sided mini-floppy discs. In use, the whole of one disc is required for the programs themselves and for work space. A second disc is employed for the database: one side for the records and the other for the index. This allows approximately 200-250 records to be held on a mini-disc system, and 700-800 records on a standard disc system. A typical SIR system record:

Document Number..... 0254
Title..... The killer smog of London
Bibliographic Description..... FROM: Man-made disasters. Heinemann, 1976, pp.60-61
Author(s)..... Butler John E
Keywords..... Book extracts: United Kingdom; Air pollution; Atmosphere; Coal; Smoke; Fog; Lung disease; Bronchitis; Sulphur dioxide; Sulphuric acid; Clean Air Act; Legislation

Hardly a complicated thing to create or to understand! The simplicity of this structure, and its flexibility in recording and giving access to the information, are significant. It is ideal for organizing files of newspaper cuttings and other small items, as well as information from or about books, journal articles and multi-media resources.

The maximum space a record can occupy is 472 characters, and within this limit only the document number is of fixed length. All the other fields can vary in length up to a maximum of 256 characters.

The scope for variation in the size of records is considerable, and this is why the figures I gave earlier for the total number of SIR records mini- or standard disc systems can hold are approximations. Equally, the index may occupy more space than the records themselves if an extensive vocabulary is used, and this reduces the total number of records held.

Creating the database is straightforward once the editing programs have been loaded. The system prompts the user for the input of the database name, and it automatically creates a new database and prompts for the input of new records if a new name is entered.

If the user enters an existing name, a list "menu" in the jargon of computerized information handling) of options is presented: to add new records, amend existing ones, or create the inverted file, the index. This last is done by the system running through a suite of four programs which select the subject words in the searchable fields. These fields are: the title, authors, and keywords. SIR sorts the subject words from these into alphabetical order - then there is an index.

An entry in the index contains the word, with an indicator to show the field in which it is located, followed by the numbers of all records in the database in which it occurs. A crucial feature is the use of the keyword field,

which confers great flexibility. Every word in the keyword field can be searched for, so that the user can structure the information in the database as broadly or finely as required.

Now that the information is in the database, the search programs can be brought into action. The user can specify a search through all three searchable fields, otherwise the system "defaults" to search the title and keyword fields only.

To control the search the user has a set of commands known as the command language. Simply by typing in a command, or a combination of commands, the user can initiate the search and then broaden or narrow it in the light of what the system retrieves.

The simplest search SIR will perform requires only the commands FIND and SHOW. FIND, followed by the subject word for which the search is being conducted, for example OIL, commands the system to look in the index to the database and identify all records which contain that word in the keyword or title fields.

The system makes a list of the records which satisfy this requirement and presents it to the user on the monitor screen. The list indicates how many records contain OIL in the keyword and/or the title fields. Then the command SHOW is used to examine the records one at a time.

The command PRINT will provide hard-copy output if the system has a printer, and there are other commands for combining search sets, displaying groups of records on the screen, reviewing searches so far, saving a search, and for running a previously saved search again.

The aim - for SIR to look as much like current on-line systems as possible - is achieved by the use of the Boolean logical operators, AND, OR, and NOT. These operators are applied to the combination of search sets to narrow or broaden a search. Variant forms of the same word can be selected together in the same set by

using the facility for right-hand term truncation. For example, FIND POLLUT* will initiate a search for POLLUTANTS, POLLUTE, POLLUTION, etc. A search set produced by FIND SEA can now be combined with that above, through use of Boolean operators, to make a search of some complexity.

This short account of SIR leaves little room for a description of how it performed in the six schools which participated in the project. It was used not just to demonstrate the principles and practice of information retrieval, but for organizing resources to support project work and for creating specialist databases such as one for careers information.

Since the project ended we have released copies of SIR to a number of organizations in education, including the MEP, for use in specified activities. We felt that the feedback from this wider use would help its future development, and the feedback has been very encouraging.

By all the accounts of those who have used it, SIR is a powerful addition to the tools for teaching computerized information handling, and for handling information for other academic and administrative purposes. The feedback has always been accompanied by urgent pleas for SIR to be made available for sale as soon as possible, and we are hoping shortly to conclude an agreement for the commercial distribution of the version which runs on the 380 Z.

This distinction is made because a version to run on the BBC Microcomputer exists, a development which was made possible by funding from the Department of Industry. Negotiations are beginning with potential commercial distributors for the BBC version, and with luck these might be concluded within the next month or two. For both versions, the SIR software will be accompanied by full user documentation, including teaching materials.

Introduction to Microcomputing with the PET

J. Arotzky, J. Taylor and D. W. Glasbrook

A non-mathematical text for beginners showing in simple stages how to program a Commodore PET microcomputer in BASIC. It presents, in simple language, a straightforward guide to computers and programming. The examples are deliberately non-specialist and cover areas such as home finance and games. £6.50 approx paper 288 pages approx Publication June

Microcomputing in BASIC on the RML 380Z/480Z

W. R. McDonough

An ideal first student text for those being introduced to computers, microprocessors and programming in BASIC in any institution where 380Z or 480Z microcomputers are available. £5.95 approx paper 176 pages Publication July

BBC BASIC

R. B. Coats

A carefully structured text that can be used to teach oneself or with more formal instruction. A practical approach is adopted to enable users to progress at their own pace. £6 approx paper 256 pages Publication July

Applesoft BASIC

A Teach-Yourself Introduction

B. M. Peake

An introduction to the use of Apple II microcomputer systems for students with little or no background in computer programming. £4.95 approx paper 120 pages approx Publication July

Basic BASIC

Donald M. Monro

£2.95 paper 96 pages

PASCAL for Students

R. Kemp

£5.95 paper 254 pages

Basic Principles and Practice of Microprocessors

D. E. Heffer, G. A. King and D. C. Keith

£5.95 paper 208 pages

Basic Statistics/Computing

D. Cooke, A. H. Craven and G. M. Clarke

£5.95 paper 168 pages

Computing Science

D. C. Palmer and B. D. Morris

£8.95 paper 408 pages

Business Data Processing and Systems Analysis

Pete Kilgannon

£7.95 paper 336 pages

Edward Arnold
41 Bedford Square, London WC1B 3DQ

"turtle" £5.00
low res. for 18K Spectrum

"turtle 2" £6.00
high res. for 16K Spectrum
(including tax, booklet, UK postage - two at our

40 learning programs
Please send us for details to:
AVC SOFTWARE
PO Box 415
Birmingham B17 9TE

FIVE WAYS SOFTWARE

For Maxwell disks and other computer supplies, such as cassette and paper, contact us for details.
Maxwell 614" single-sided disks £20.20 per 10
Maxwell 614" double-sided disks £28.30 per 10

Educational and quantity discounts available.
Five Ways Software, Maxm House
662 Bristol Road South,
Birmingham B31 2UX
Tel: 021-477 0181

IRWIN MICROPIPPASYSTEM

MICRO ELECTRONICS FOR EDUCATION
MICROPROCESSOR TECHNOLOGY SYSTEM
INTERFACE FOR MOST MICROCOMPUTERS
MICROCOMPUTER CONTROL SOFTWARE
PERIPHERAL MODULES LOW COST



ILLUSTRATED: SOME EXAMPLES FROM THE MICROPIPPA SYSTEM

A new range of products, designed to assist the teaching of microelectronics, integrated circuit logic and microcomputer control, together with microcomputer software tailored for educational use.
For details of the complete range and an application for a free and fully descriptive 400 page catalogue to:
IRWIN DESMAN LTD, 294 Purley Way, Croydon, CR9 4OL Telephone: 01-886 8441.

Give them all a Chance!

Schools are quickly finding that one computer just isn't enough. Equip your school with Sindair Spectrums from E J Arnold, and give everyone 'hands on' experience.

The Spectrum offers:

- *powerful 48K computing
- *an expanding range of software
- *exciting new peripherals

and at a price which gives your school the chance to buy the computers it needs. All this is backed up by the E J Arnold School Computer Service and the reliable new range of software from our own publishing venture, Arnold-Wheaton Software.

Schools requiring further details should complete the coupon, or telephone (0532) 772112 extension 2000.

Name _____

Position _____

Address _____

To: E J Arnold and Son Limited,
The School Computer Service, FREEPOST,
Parkside Lane, Dewsbury Road,
Leeds LS11 9JY

EXTRA

Modelling work

Michael Thorne on LOGO and PROLOG

Much of the computer software currently available for school use consists of programs whose content is directed at one specific curriculum topic. The styles embraced range from Disguised Drill and Practice (DDP) to teacher directed simulations. In primary schools there is no widespread use of any programming language; secondary schools have, by and large, adopted BASIC but only in Computer Studies classes. Indeed, the only general purpose software to reach a wide variety of subjects is that involving the creation and accessing of a data base in some way. Other potential teaching and learning aids borrowed from the computing world — such as word processing systems and financial modelling packages — have yet to pass from the hands of the pioneers.

Database and simulation work apart, the concentration of activity is in maths and science. This has much to do with the current ratio of pupils to computers. If each child in a class had a word processing system which was easy to use then it would seem reasonable to expect a change in the attitude of the class to correcting written work. Redrafting could become an activity in which all students — good or bad — expect to be involved after a piece of written work has been looked at by their teacher.

Moreover, if a computer based dictionary and thesaurus were available from the same computer, to be called up at the press of a button, children's vocabulary might be edged beyond the "I think it's really great" barrier. Given only one computer for the whole class there is no obvious way in which such an activity could be organised so as to become a "natural" part of essay writing.

Were one computer per pupil available, that on its own would not be sufficient. Text processing software suitable for school use has yet to come on the market. TXED for the Research Machines 380Z has for many years been the only text editing package available. In terms of its user interface — the part of a package designed to make that package usable by ordinary mortals rather than robots — it is a disaster, regardless of whether the users for whom it was intended were to be experts or novices. (Too many teachers of computer studies eulogise over this museum piece of software).

There is light at the end of the tunnel, however. Peter Weston of the North Wessex MEP Centre in Wrexham has designed an Educational WORD processing package called EDWORD which attempts to meet the needs, and match the abilities, of pupils at school. The specification of EDWORD is exciting to say the least and the package should be available from MEP in September at a reasonable cost (see page 52).

For the time being, we have to manage with one computer for a class of 30 children. Teacher directed simulations are bound to be popular, therefore, as they can be structured to involve a whole class round one machine. If the class is thereby transformed into newspaper editor and team then just the "editor" sits at the word processing system. That person is then responsible for cutting an article of 1,000 words down to 300 so that it fits into the front page layout. Once the front page has been prepared it can be printed by the computer resulting in a real school newspaper.

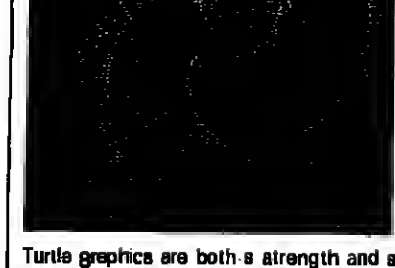
In this way the pupils involved learn far more about language than from the abstract exercise "Summarize the following passage in 300 words", however disguised. But the idea embraces

more than just language — issues like bias in the media and the content and hidden meaning of advertisements can arise in a natural context.

Critics of teacher-directed computer simulations point out two major difficulties. First, people in the "real" world often adopt successful strategies for doing things without discovering why they work. A car mechanic may know how to adjust a carburettor so that the engine runs better without any understanding of the physics and chemistry involved. A train driver does not need to know why the track is banked at a certain point on the route, he notices only (if at all) that he doesn't have to slow down.

Second, many simulations depend so much for their success upon the abilities of their creators that they are non-transferable products. Never was this clearer than when in April at the MAPE conference, an audience sat open mouthed watching Barry Holmes and Ian Whittington demonstrate some of their latest efforts. All that is needed to accompany the computer based material they provide is a teacher confident in the subject matter — the police, flying an aeroplane and archaeological exploration amongst other things — and with the time, energy and dedication to involve local resources like the local Chief Constable.

At present, few simulations involve children in actually programming the computer; that is, in actually doing the necessary modelling themselves. But the success or failure of British Rail to run a service to a timetable, the production of a car with a certain average petrol consumption and the smooth flow of traffic at a busy road junction all depend on "real" computer simulations where the construction of an accurate model is the key factor.



Turtle graphics are both a strength and a weakness of LOGO

Could not both criticisms of teacher directed computer simulations be met by allowing pupils to create their own? If they build the model then they will necessarily know the hypotheses on which it is founded and the teacher's role will be to advise during the construction.

It would be wrong to think that this in any way limits us to mathematical simulations. Given a programming language in which words can be handled easily, one could model the character of a person by his or her speech. One could thus create conversations between Mr Happy and Mr Grumpy or even Emma and Mr Woodhouse. On the other hand, given good graphics capabilities, it could be possible to model on the computer display the tropisms of insects like wood lice and of small rodents like rats and mice.

Allowing children to program in this way raises the question: which programming language? BASIC is just not powerful enough for this purpose. Indeed the crux of getting computers involved in the humanities in school is to give the pupils more control over the computers they use. With Basic too many details outside of the modelling task have to be absolutely right and a problem cannot be broken down into independent sub tasks. Nevertheless Basic is popular because it is widely accessible in every

mathematics is virtually impossible whilst the possibilities within mathematics are but a shadow of those available from real Logo.

Under the one computer/hundred children circumstances, in the UK, real Logo is largely untapped. Most teachers are themselves unaware of the full capabilities of the language outside of Turtle Graphics. Prolog has received even less attention despite the fact that its use in education has been pioneered by our own Richard Ennals, an ex-history teacher. Naturally enough for an historian, his early work was concerned with database applications of Prolog. This has overshadowed both the possibilities for modelling and the potential of Prolog to provide children with an automatic hypothesis checker. Using the latter title job would be to provide the hypothesis and relevant facts about the situation, the Prolog system would then do the easy bit and verify (or not, as the case may be) the hypothesis.

A Prolog program consists of a collection of facts and rules and "running" a program involves getting the system to check a given piece of information against those facts and rules. If we follow Enid Blyton and define a villain by the Prolog rule: villain (X) if has-beard (X) and we have the facts: has-beard (John) and-ic (John) then checking the query ?villain(john) will produce the answer: YES.

Putting shires many of the qualities of Logo. Programs can be built up in a modular fashion by filling together building blocks, constructed independently of each other, and it is possible to extend the language in such a way that, once added, new commands appear as if they had been in the language all the time. Until recently, however, the version of Prolog available to schools did not have any graphics capabilities. A first step at rectifying this omission has been made by Derek Ball of Leicester University who has augmented Prolog for the Research Machines 380Z by adding Turtle Graphics. The result is a little like the language Frangile: on suffer on shock de culture come on match de l'un langage de the other. Nevertheless Derek Ball has paved the way for a fuller exploration of the classroom potential of Prolog.

Both Prolog and real Logo are promised for the BBC computer and the Sinclair Spectrum soon. Prolog will almost certainly be available first and according to its designers will come with real Prolog graphics where a point is plotted by interpreting conditions upon it — and with a friendlier user interface than that of the 380Z version. Real Logo is currently available only on the 380Z in a version from Edinburgh University. All other versions for DOL machines are user simulations as far as modelling is concerned.

Nancy Roberts and her colleagues have demonstrated in a recently published book *Introduction to Computer Simulation* (Addison Wesley) that we in the UK have barely scratched the surface. Fundamental to this work has been the computer language DYNAMO, which effectively equates the notion of differential equations available to students who don't know calculus. Amongst others they describe projects involving the Nuclear Power Controversy, the dilemma of solid-waste disposal, family dynamics, the flu, the rabbit population, the ecology of the Kalbarri Meadows, urban growth and heroin addiction. All this and more will be possible when real Logo and Prolog are widely available.

Logo is the programming language of choice for Seymour Papert, and for its Turtle Graphics commands which allow the user to program a pen-pulling Turtle to walk about the computer's display screen. Thus the commands: FORWARD 10 RIGHT 90 FORWARD 10 RIGHT 90 FORWARD 10 RIGHT 90 FORWARD 10 RIGHT 90 would cause the Turtle to trace out a square of side 10 and finish facing the direction in which it started.

Turtle Graphics are both a strength and a weakness of Logo. The strength derives from the fact that this idiosyncratic view of computer graphics allows children access to ideas previously thought very difficult — differential geometry for example. In short, through simple means very complex end products can be achieved.

The weakness derives from both a tendency to equate Logo with Turtle Graphics and the relative ease with which the Turtle Graphics part of Logo can be implemented on microcomputers. Too many people are publishing collections of Turtle Graphics routines with a drill and practice text book and calling the result Logo. As a result, many teachers Logo means drawing pictures on the screen. They're not quite sure why this is a good thing except possibly for mathematics because it is obvious that geometry is involved. But what makes Logo so good for modelling is not just the Turtle Graphics. Rather it is the surrounding in which these particular facilities are embedded: the ability to solve a big problem by breaking it down into totally independent subproblems, the solid-waste disposal, family dynamics, the flu, the rabbit population, the ecology of the Kalbarri Meadows, urban growth and heroin addiction. All this and more will be possible when real Logo and Prolog are widely available.

IF YOU TEACH

If you teach in a Primary or Secondary School you know that most schools are now becoming involved with microcomputers. So why are some schools surging ahead with the use of micros, whilst others are in danger of falling behind or under-using a valuable resource?

Quite simply there's an inequality of "awareness" — a lack of information on how to best use the micro as a valuable teaching aid.

BUT THERE IS A SOLUTION

Educational Computing is a monthly

But Some Are More Equal Than Others

magazine read at all levels of education. Educational Computing is the only computing magazine devoted to you — the teacher — showing you how to put your micro to work across the curriculum.

Find out what educational software is available for your subject — how other schools and colleges have implemented the micro in the curriculum — what the Government's really doing — courses — vacancies — opinions — news and hardware — innovations — applications — and the future of education.

All Schools are Equal

SO, IF YOU TEACH

So, if you teach any subject, from Biology to Geography, from German to Gymnastics, Educational Computing will inform you how to best use your school's resources with fresh ideas.

Get a FREE sample copy today by simply writing to:

Valerie Day,
Sample Copy Offer,
Educational Computing,
8 Herby Hill
London EC1R 5JB
EDUCATIONAL
COMPUTING

ACORN Books

MARKETED BY JOHN WILEY AND SONS LTD

CREATIVE GRAPHICS ON THE BBC MICROCOMPUTER

by John Cowlin

This book explores the excellent graphics facilities provided by the BBC Microcomputer. There are complete listings for 38 programs which will run on either the A or the B Model to produce a dazzling range of pictures and patterns in full colour.

The programs presented in this book are also available on cassette.
0 907 87803 X 120pp (paper) £7.50

GRAPHS AND CHARTS ON THE BBC MICRO COMPUTER

by Robert D. Harding,
Dept. of Applied
Mathematics &
Theoretical Physics,
Cambridge University

Describes a set of graphic routines which can be incorporated into programs to present data graphically in a wide range of applications. The programs presented in the book are also available on cassette.

0 907 87804 8 110pp (paper) £7.50

ACORN Software

MARKETED BY JOHN WILEY AND SONS LTD

WORD HUNT FOR THE BBC MICROCOMPUTER MODELS A & B

This pack contains four Word Hunt programs on cassette. Each Word Hunt program contains a list of nine words. The object of the exercise is to select one word and then to try to create as many smaller words as possible from the selected word. The control over the selection of the word and the amount of time allowed for the exercise is given to the user in the "Teachers' Notes" section. Once these selections have been made the program can be used by up to 20 players and their performance stored for later recall.

0406 000 227 £11.90 (inc. VAT)

SENTENCE SEQUENCING FOR THE BBC MICROCOMPUTER MODEL B

Get in Order Nursery Rhymes

This pack contains two Sentence Sequencing programs on cassette. Each program presents a series of jumbled sentences which must be re-arranged to form a nursery rhyme or a logical sequence of sentences. Sentences to be moved are first located and selected using the cursor up and cursor down keys.

0406 000 251 £11.90 (inc. VAT)

NUMBER BALANCE FOR THE BBC MICROCOMPUTER MODEL B

Addition/Subtraction/Multiplication/Division. This pack contains two programs on cassette. Balance is a pictorial program for practising simple mathematical operations for numbers 1 to 20. The object of the exercise is to make a balance level by inputting the correct missing number into one side of a simple equation. Incorrect answers will tilt the balance in the appropriate direction; after three incorrect attempts the program responds with the correct answer.

0406 000 28X £11.90 (inc. VAT)

ELLS Books

MARKETED BY JOHN WILEY AND SONS LTD

MICROCOMPUTERS IN EDUCATION

edited by Christopher Smith, Department of Physiology, Queen Elizabeth College, University of London. This book covers the many problems that derive from the use of microcomputers in education and the training of teachers. It looks at the broadly based applications of microcomputers in fields such as school administration, special education, computer graphics, and classroom equipment.

088312 424 8 212pp (cloth) £18.50 (paper) £10.50

MASTERING THE VIC-20

by Antonio Jones, University of London; Elizabeth Coley, Dymond Limited, Reading; and David Cole, Pro-Bel Limited, Reading.

This book is a machine-specific introduction to microcomputers based on the VIC-20, designed to supplement the booklet provided with the machine. It offers a wealth of interesting programs which can be supplied separately on tape or disk, or entered by the reader.

086312 585 8 178pp (paper) £5.95

HAYDEN Books

MARKETED BY JOHN WILEY AND SONS LTD

I SPEAK BASIC SERIES

by Aubrey Jones. A field-tested computer literacy course that introduces students to BASIC language programming. Requires no previous computer experience for teachers. This complete one-term program is machine specific. The annotated Teachers Manual provides approaches for lesson planning. Student text features learning objectives, program definitions and examples, group activities, assignments and practices.

Teachers Manuals:
08104 8184 1 TRS-80 248pp (paper) £16.20
08104 8185 X Appa 282pp (paper) £16.20
08104 8188 8 PET 284pp (paper) £16.20
08104 8189 2 Vic-20 286pp (paper) £16.30

Students Text:
08104 8174 8 TRS-80 224pp (paper) £7.45
08104 8175 7 Appa 238pp (paper) £8.45
08104 8178 5 PET 240pp (paper) £8.45
08104 8178 X Vic-20 242pp (paper) £7.25

Classroom and Exam sets are also available — please write for further details

NECO Books

MARKETED BY JOHN WILEY AND SONS LTD

INTRODUCING COMPUTERS

by M. Peltu

This book aims to describe the background to computers, and to provide a comprehensive introduction to the main aspects of computers and computing.

085012 321 6 428pp (paper) £5.50

WORKING WITH COMPUTERS

A Guide to Jobs and Careers, 3rd Ed.

by The National Computing Centre

A general introduction to computing as a career for school leavers. Covers how a computer is used, what types of jobs exist and how to train for them.

085012 359 3 78pp (paper) £3.75

Books

MARKETED BY JOHN WILEY AND SONS LTD

GETTING MORE FROM YOUR PET/CBM

Advanced Microcomputer Applications

by Edward A. Flinn, Arthur E. Hill and Robert D. Tomlinson, all of University of Salford

For a number of years the authors have been running a series of highly successful and proven courses at Salford on the PET/CBM computers for a wide spectrum of audiences. This book is a distillation of the experience gained on these courses and represents a wide and readable coverage that is easily understandable by anyone having any familiarity with the PET/CBM.

0905104 23 4 188pp (paper) £7.50

THE SINCLAIR SPECTRUM IN FOCUS

by Mark Harrison, Software Sciences Ltd.

This book supplements the Sinclair operating manual and provides answers to some of the questions posed but left unanswered in the manual. It is designed for readers of all ages.

0805104 28 8 198pp (paper) £8.25

THE VIC-20® FOR CHILDREN

by Tony Nobla

Now that microcomputers are finding their way into schools, parents should also find that this book — with a VIC 20 — will also provide valuable but of school education. After all, a class of 30 with one computer gives little chance for hands-on usage, but this book can solve the problem. Everything from switching on the VIC 20, through simple BASIC programming to exciting games and puzzles.

0905104 26 0 150pp (paper) £5.95

Software

MARKETED BY JOHN WILEY AND SONS LTD

THE BROADWATER ECONOMICS SIMULATIONS

(Software Cassette and Student Notes, Teachers Notes and Documentation)

by Graham Addis, Worthing VI Form College, Sussex

This is a comprehensive suite of macro-economic simulations. It consists of graded programs plus the MACRONOIA program which runs the British Economy under either a Keynesian or Monetarist model, thereby giving considerable topicality. Each of the programs is of a modular design, permitting the model to be easily changed.

0905 10488 X RML 380Z 18K £28.75 (inc. VAT)
0806 10448 3 Sharp MZ-80K 32K £28.75 (inc. VAT)
0805 10447 1 SSC Model B 32K £28.75 (inc. VAT)
0805 10418 1 PET 2000, 3000 8K* £28.75 (inc. VAT)

* (minimum system)
* (Optional 18K on some programs 4000 series)

Software

MARKETED BY JOHN WILEY AND SONS LTD

Software, an outstanding range of educational software, represents an important addition to the range available from Wiley. An active publishing programme is in preparation and full details are now available — see coupon below.

WORDPOWER

Vocabulary & Spelling

WORDPOWER is a powerful package containing more than 1200 words, including opposites, synonyms, nouns, adjectives, collective and similes. It offers a choice of two games, plus a key-in option and different levels of difficulty making up a complete package that increases and enriches vocabulary, teaches how to use words more accurately and helps spell correctly.

0848858021 BBC Model B 32K approx. £8.95 (inc. VAT)

0848858005 Spectrum 48K approx. £9.95 (inc. VAT)

0848858013 Dragon 32K approx. £11.00 (inc. VAT)

(Publication due June 1983)

SPELLBOUND: BESIEGED Spelling

There are four packages in this series: BESIEGED, TOWERING INFERNO, BAILIFF and GOLDEN APPLE. Each is designed to pull together the quirks of English spelling within a game that will keep the user spellbound.

0848858048 BBC Model B 32K approx. £8.95 (inc. VAT)

0848858080 Spectrum 48K approx. £9.95 (inc. VAT)

0848858129 Dragon 32K approx. £8.95 (inc. VAT)

(Publication due June 1983)

THE GRAMMAR TREE

THE GRAMMAR TREE uses the new technique of modern grammar to teach how sentences are built up

(1) Nouns, Articles and Adjectives

0848858 242 BBC Model B 32K approx. £8.95 (inc. VAT)

(Publication due July 1983)

0848858 218 Spectrum 48K approx. £9.95 (inc. VAT)

(Publication due June 1983)

(2) Verb Phrases, Verbs & Adverbs

0848858 280 Spectrum 48K approx. £8.95 (inc. VAT)

(Publication due June 1983)

0848858 228 BBC Model B 32K approx. £8.95 (inc. VAT)

(Publication due July 1983)

(3) Sentences

0848858 269 Spectrum 48K approx. £8.95 (inc. VAT)

(Publication due June 1983)

0848858 234 BBC Model B 32K approx. £8.95 (inc. VAT)

(Publication due July 1983)

0848858 234 BBC Model B 32K approx. £8.95 (inc. VAT)

(Publication due July 1983)

0848858 234 BBC Model B 32K approx. £8.95 (inc. VAT)

(Publication due July 1983)

0848858 234 BBC Model B 32K approx. £8.95 (inc. VAT)

(Publication due July 1983)

0848858 234 BBC Model B 32K approx. £8.95 (inc. VAT)

(Publication due July 1983)

0848858 234 BBC Model B 32K approx. £8.95 (inc. VAT)

(Publication due July 1983)

0848858 234 BBC Model B 32K approx. £8.95 (inc. VAT)

(Publication due July 1983)

0848858 234 BBC Model B 32K approx. £8.95 (inc. VAT)

(Publication due July 1983)

0848858 234 BBC Model B 32K approx. £8.95 (inc. VAT)

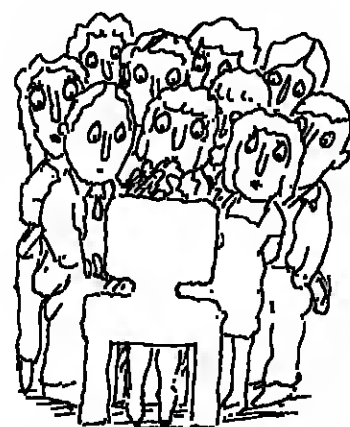
(Publication due July 1983)

0848858 234 BBC Model B 32K approx. £8.95 (inc. VAT)

(Publication due July 1983)

0848858 234 BBC Model B 32K approx. £8.95 (inc. VAT)

(Publication due July 1983)



Chip chat

Frances Farrer
listens to a new
speech synthesizer

Paul McGee on new case study papers at CSE and O-level



written neatly and precisely in ordinary English, and that a sequence of numbered statements is frequently better than a series of cryptic messages in boxes. For describing complex systems, it is often better to use one of the standard systems flowcharts which convey a great deal of information about the media, the origin and function of data used, and the sequence of operations.

**Only three
but already
circulation**

skim through the examination papers and then produce a rough or outline solution upon which they base their teaching and advice to their pupils at a course at the London University Institute of Education, 60 Tottenham

This article might have given the impression that preparation for some examinations is based on exam technique. Although this is important, a major contribution comes from having followed a course in which pupils have the opportunity to apply the principles of information processing to a variety of applications. The examinations are in their infancy, but those who designed them believe they can be a reliable form of assessment which will give pupils a useful, while, stimulating and enjoyable course.

Most of our contributions to the entire publication have been designed from an educational viewpoint, with frequent injections of fun and games. A unique approach that will be considerably expended in future issues.

Because teachers are finding BBC Micro Uast an invaluable aid we are offering a specially reduced subscription rate for readers of the Times Educational Supplement of £8 instead of the normal £12. To take advantage of this offer, please use the coupon below.

Alternatively, if you want to know about even greater reductions for bulk purchases (10 copies or more) please write to: Don Jones on 081 456 8383 or 8600.

- **Shapes** – a technical colour tangrams program that teaches the concepts of coordinates in an enjoyable manner.
- **Nim** – a game of strategy that will generate hours of useful classroom discussion.
- **Bits and Bytes** – a gentle introduction to the ways computers do their sums!
- **Clings and Horoscopes** – two surreal fundraisers that also illustrate useful programming points.
- **Interlocking** – harnessing the power of the BBC Micro in the school laboratory.
- **Joysticks** – how to construct cheap and simple joysticks that will add new dimensions to your programs.
- **Structure** – a series of articles showing how structured programs can almost write themselves.
- **PLUS** lots of easy to follow beginners' articles written by teachers for teachers.

Post to: BBC Micro User, Europa House, 68 Chester Road, Hazel Grove, Stockport SK9 7NY.

Appreciation series for

... and other materials

Road

The book describes, in simple terms, ways in which this microcomputer can be used in the primary school. Chapters describe the management and operation of the micro: its capabilities and limitations. A section describes a number of programs and packages available in the UK for primary use. These are chosen to illustrate the range of approaches that the micro offers and includes photographs of screen displays.

Please send new 1983/84 ICL-CES catalogue

CES catalogues

* Case Studies

- Newsagents System
- Computers in the PVLC

with software from MEN

- Wallposters
- Display Boards

- Overhead Projector Transparencies
- Flowcharting Templates

• Coding sheets

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

Further information can be obtained from Acorn Computers, 10 Hendella Street, London WC2.

EXTRA

Nelson Computer Assisted Learning

NELCAL is Nelson's new imprint which has been established to produce a series of top-quality educational programs. A comprehensive range of subject areas is covered and the programs are suitable for use on several brands of microcomputer.

NELCAL software programs are produced by specialist authors, practising teachers and professional programmers. Each is fully tested and well-documented.

NELCAL materials covering the following subject areas are now available:

Computer Studies Chemistry Mathematics

Also in preparation are packages covering:
Peak Mathematics (primary)
Geography (primary and secondary)

Send for the latest NELCAL leaflet, containing information on all these packages, by writing to this address:

The Promotions Department, TES 27.5.83,
FREEPOST, Thomas Nelson and Sons Ltd,
One Gunpowder Square, London EC4A 3DF

Writing systems

Peter R Weston on word processing

A word processing system enables the user (pupil and teacher alike) to enter text, store and retrieve it, look through it, make changes and finally print it. Word processing is rapidly becoming a fundamental part of secretarial, commerce and business studies courses. There is also increasing interest among teachers of English and modern languages as well as primary school teachers. It is the control over the manipulation, and hence the final format, of text which interests teachers seeking to develop communication skills in their pupils.

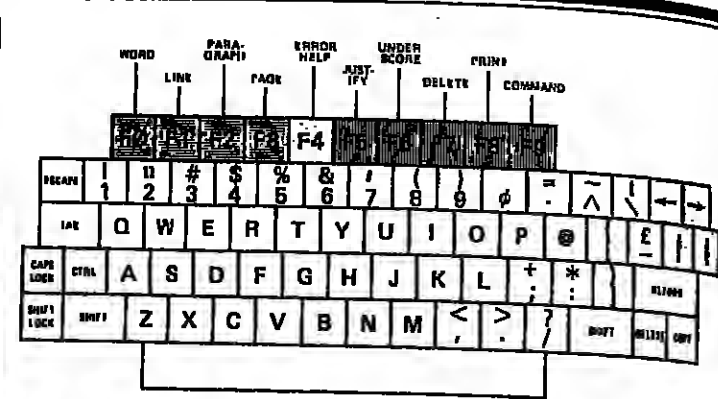
The basic components of a word processing system are a keyboard, a processor with a memory to hold text, a screen display, external storage to hold permanent copies of documents and a printer. Dedicated commercial word processing systems are far beyond the price range of schools (eg £4,000 for one system). However, the microcomputers already in schools can provide a word processing capability through the addition of a suitable computer program known as a word processing package.

Ability range

In general terms the facilities available within the package must relate to the ability range of the pupils who will use it. Automatic page numbering may be useful to staff using the package to produce work sheets, but how many pupils will be manipulating several pages of text? Ideally pupils should be able to work without constant recourse to a teacher. Packages should be robust in terms of user interface and error conditions (eg a faulty disc, without losing the text or simply giving up). For those pupils following a secretarial/commerce/business studies course it is important to consider whether the user interface (the communication between pupil and package) will allow them to adapt from any previous keyboard experience. One must be aware that some word processing packages may contravene what pupils have already learned.

Many of the word processing packages available for microcomputers are claimed to be suitable for pupils' use. However, few seem to have been designed by teachers. Their mode of operation, in particular the user interface, often reflects methods more familiar to those with computing expertise than teaching experience. Base of use is essential, particularly for pupils whose experience of microcomputers may well be limited. Commonly used functions should be available preferably via a single key stroke as opposed to holding down two keys simultaneously, such as the use of SHIFT and CONTROL keys. Preferably commands should be easily remembered. Mnemonic codes for example, such as S for "search" or T for "top of page" will facilitate use by pupils.

We accept that pupils will make mistakes. In the learning situation they often learn through trial and error. Teachers cannot, and should not, be alongside every pupil using a microcomputer. Thus the provision of helpful, easily understood



The Edword keyboard layout.

error messages is vital to allow pupils to both learn and explore a word processing capability. A message of the form "It is only possible to move into the left margin by using..." is far more useful than "This command is not allowed" and is infinitely preferable to "Error 17". Continuing on a similar theme, I believe the inclusion of "safety net" features to be essential for inexperienced users. For example, it should be impossible to lose a document without confirming that this is the required action.

The relationship between text entry, screen display and printed copy is not always as direct as one may imagine. A pupil should be able to enter text and, at all times, simultaneously see an exact copy on the screen of what would be printed on paper. Not an unreasonable request perhaps, but packages exist where text is entered in a 40-column mode (possibly useful for class demonstrations) and yet it is printed in 80 columns. Even if you can obtain an 80-column display, this may not be available for text entry.

This inhibits pupils in producing good document layout. Some packages display special symbols on screen to indicate that sections of text should be underscored or centred on printing. For pupils, such text should be underscored or centred on the screen. A screen based system (one displaying an exact copy of the printed version) with 80-column display, and ideally a 40-column option, is essential for educational word processing.

The availability of resource materials for pupil and teacher is very limited. Generally word processing packages are supplied "complete with user manual" but little else. It is most unlikely that a user manual will prove to be a suitable text for pupils. Indeed some may well prove to be unintelligible to teachers. You will need to assess what resource material you must produce specifically for your pupils. Study the package's documentation carefully. Is there a step by step guide that introduces and explains the various features of the package? Consider the order of presentation of facilities, the level of language, and the ease with which you can refer to specific commands and facilities.

Technical considerations may have to be biased towards hardware you already have. The three major areas to be considered are the word processing software (program) itself, document storage and printing facilities. Word processing software is available on tape, disc and, more recently, ROM (Read Only Memory) chips. Disc is the most common medium and provides a fast means of getting the software into the internal memory of the microcomputer. Software on tape may be cheaper but is also slower by a factor of at least 50. With both tape and disc it is usually possible to make copies for additional microcomputers but this may well infringe copyright and cannot be condoned. When software is loaded from tape or disc it occupies some of the microcomputer's internal memory, possibly restricting the size of documents to be handled. In contrast, software on a ROM chip is permanently plugged into the microcomputer and uses a minimal amount of internal memory. Obviously a chip is required for each microcomputer but the software is always ready when required.

Documents can be stored permanently on disc or tape. Ensure that the package you purchase can utilize the medium you wish. Disc provides a

fast, more reliable means of storing and retrieving documents. Each disc has a catalogue, or directory, containing a list of all documents stored on it. It takes about one second to find out what is on a disc. However, you generally require written lists to be maintained together with positions indicated by tape counter readings. Not surprisingly disc storage is more expensive than tape - typically £25 for a tape recorder and £200 for a disc drive.

There are two types of printer generally available - dot matrix and daisy wheel. Dot matrix printers are prevalent throughout our schools. They are relatively low cost printers that produce a pattern of dots to represent each character. The features available vary between printers but may include automatic underlining, text emboldening, "double width" characters and italics. You need to match the facilities offered by the software with those available on the printer you intend using. Good quality dot matrix printers, essential for correspondence, are far more expensive and may not offer the same range of facilities. For pupils' use the dot matrix printer is perfectly adequate. Not all word processing packages will necessarily operate with every printer. Some require specific printers while others may need additional software which costs extra. Check this carefully - do not make any assumptions.

Since September, 1981, I have directed a major curriculum development project partly funded by the Microelectronics Education Programme (MEP) in Wales. We have produced software and teaching materials as part of an Educational Word Processing package - called EDWORD. The views expressed in this article result from, and have been incorporated within, the development of this package.

Edword has been designed and shaped by educationalists with considerable experience both of teaching secretarial skills and of computer based curriculum development. In developing Edword our approach was to design a word processing package to meet the needs, and match the abilities of school pupils. Its development was monitored by a group of teachers drawn from all the LEAs in Wales. Trialing and evaluation has taken place in schools throughout Wales.

Evaluation

The software runs on both model A and model B BBC Micros and can use tape, disc or a network for document storage. Edword will also work with any printer compatible with the BBC Microcomputer.

The final package includes a 16K ROM chip containing the software, a flip book for use by pupils (free standing, self-instructional), keyboard insert (to label function keys), OHPs, wallcharts, specimen documents on disc and cassette, teaching guidelines (strategies, methodology and management) and a User Manual.

The screen is divided into three sections. The top area continually displays information about the status of the document, while the bottom area is used for command entry and error messages. The document is displayed

Writing systems

continued from previous page

exactly as it would be printed in the centre section which is known as the "document window". The information area at the top continually shows the document name and the current mode as well as the current page, line and column position of the cursor. The indicator "E" is displayed if the system is printing. "U" if underscore is turned on and "O" if overtyping is turned on.

Most common functions can be accessed with a single keystroke. Less common functions are accessed by hitting the COMMAND key (see keyboard layout). Pressing the COMMAND key produces an audible indication and causes a request for a command to appear in the bottom section of the screen. A single letter command will then initiate the appropriate operation. Some commands require extra information which is also requested and entered in the bottom area of the screen. The object keys (WORD, LINE, PARAGRAPH, PAGE) allow a section of the document to be illuminated. Certain operations can then be performed on the whole of the illuminated object.

Both the flip book and keyboard insert use colour codes for the object, operation and error help keys. Errors are normally just indicated by an audible "beep". If required, an explanation of the error can be obtained by pressing the ERROR HELP key. The explanation will appear on the bottom two lines of the screen and be cleared on the next keystroke.

Text is entered and inserted in a document simply by using the normal keys on the keyboard. Any symbol which is typed will be inserted into the document at the current cursor position. Naturally the cursor can be moved around the document using the four cursor control keys. The system will automatically rearrange the text as alterations are being made to keep the text within the specified margins without splitting words.

The current line can be centred between the margins with the cursor left at the start of the next line. If an object is selected then the illuminated section of text is centred between the current margins. Justification involves padding a section of text with extra spaces to give a straight right-hand (as well as left-hand) margin. If an object is selected then the illuminated section of text is justified between the current margins; otherwise the current paragraph is justified. Paragraphs may be indented both as an editing operation and during entry of text.

It is possible to enter text into a search for a given string of characters. If required, Edword will replace those characters by a second string entered by the user. Replacement can take place throughout any section of text (from a word to the complete document) or alternatively just the first occurrence can be replaced. Characters may also be replaced by overtyping. Text can be entered at predetermined positions within a document. Blocks of text may be moved within a document, thus effectively providing the electronic equivalent of "cut and paste".

It is possible to switch on/off a display of all the spaces and RETURN characters held within a document. These characters are displayed using special symbols. This inclusion facilitates the teaching of principles such as justification and paragraph marking. They provide the user with a tool that assists in both formatting and error analysis. (In conjunction with (ERROR HELP).)

What we in education must do is to ensure that the word processing package we use is designed for our users - the pupils. Bear in mind, however, that just because our packages are educational there is no reason why they cannot provide many of the commercial features available in

Peter R Weston is Project Director, Word Text and Information Project, with MEP in Wales. Information about EDWORD can be obtained from C. W. R. Jones Ltd, Department EWE R, Church House, Kelston Road, Flint, Chwyd.

Muppets, mazes and maths

Carolyn O'Grady on programs for pre-school children in the USA

According to marketing surveys most people who buy computers for the home at present are married with two children aged six and up. The next onslaught on the domestic market will probably be aimed at changing this consumer profile. Software for pre-school children is being produced in this country and certainly in the USA a great deal of software for very young children is coming on to the market this year.

The largest producers of software for this age group in the USA is the Children's Computer Workshop, an offshoot of the famed Children's Television Workshop, producer of *Sesame Street*. The 24 programs they are producing this year will probably be instant hits with parents already won over by the lovable characters, expertly executed animation sequences and educational success of *Sesame Street*.

Sesame Street is an all-American show, from its jokes down to its pronunciations and spellings, but this hasn't stopped it being taken up in 50 countries, and inevitably it has spawned an industry the products of which include furry toys, books, records, foods, a play park and recently the Children's Computer Workshop, a wholly owned "for profit" subsidiary of the Children's Television Workshop.

The first programs from CTW, made in conjunction with Busch Entertainment Corporation, were 16 programs created for the Sesame Place entertainment play parks. These are in Langhorne, Pennsylvania and Dallas Texas. Following this the Children's Computer Workshop was set up last year and during this year will be producing 24 games to be distributed by Tandy and Atari of which at least a

half will be for pre-school children. Undoubtedly many of these will soon be finding their way across the Atlantic.

The principles behind the design of the software, says Jean Marlow, Marketing Manager of CCW, are very much those which lie behind the making of *Sesame Street*: the first objective is to entertain, and therefore there is a large element of play. "The play should enhance the learning by making a friendly process, encouraging the child or young person to experience new concepts and exercise new skills. In turn the learning enriches play."

Many of the programs apply themselves to the primary pre-reading concerns of nursery schools: shape recognition and counting included, while others are the sort of puzzles often found in children's puzzle books; mazes of every type and skill level are the favourite.

Thus we have the Cookie Monster Munch in which the child gets the cookies out of the mazes and puts them in a jar shared by the Cookie Monster, or Ernie's Magic Shapes, in which the child helps Ernie find his shapes and make them into pictures. In this one the child has to choose the correct shape and colour. There is also Grover's Number Rover in which the child helps Grover find the answer to various number problems. These games can be played at six different levels.

None of these games are particularly educationally sophisticated and the subjects are those chosen by most publishers of software for this age group. Where they score is in the quality of the graphics and in the use of characters which the children can recognize and identify with.

Much pre-school software already available is surprisingly workbook-like in its approach. Intelligence tests on the screen badly written with very little depth. The programs from CCW do try to engage the children's feelings as well as their intellect. CCW are also well aware that computer graphics are often a real disappointment to children used to technically superior cartoons on television and beautifully drawn children's books. Some of the unfinished programs will contain graphics of a quality as yet unseen in the market.

Perhaps the Workshop's most original contribution to the software available for the lower age range are those programs which demand cooperation: a value much stressed in the *Sesame Street* series. What is interesting about these games is that they are not advertised as cooperative games; it becomes obvious in the course of playing them that two will fare better together than one working either individually or competitively.

Take Peanut Butter Panic. Two nutnicks are in search of moving stars to power their peanut butter sandwich-making machine. The more stars the two players catch the more sandwiches they can make. But the more they jump for the stars the thinner and less able they become. Then they have to eat the sandwiches to get more energy. The biggest stars can only be caught by cooperation - by launching each other on the star spring and children, said Miss Marlow, soon begin to work out a cooperative strategy for overcoming the problems.

Taxi is another game emphasizing cooperation. A two-cab taxi company can be operated in a choice of six international cities. Passengers are

picked up and fares and tips collected. But to make the best and most profitable use of their time the children must cooperate.

This facility of the microcomputer to encourage cooperative games is often noted by educationalists and is in direct contradiction to the fear often expressed by teachers and parents of the isolating effect of microcomputers. Because of the immediacy of the effects and the desire to achieve those effects children and adults often opt for cooperation rather than competition when faced with a problem.

CCW is only one source of a lot of material for the home market which is about to be made available in the USA and subsequently over here. They are, however, the largest source and they are one which will appeal to many parents because of the association with *Sesame Street* and an advertising campaign which stresses that the products are "age-appropriate, non-violent, non-sexist, pro-social and fun".

They will also be technically first-class. The team of educational experts behind them is very impressive, including Professor Andrea A di Sessa of MIT. But educationally imaginative they - surprisingly - are not. This characteristic may be more evident in the CCW products for schools, many of which are being released at the same time. Parents and nursery schools could do well to see what also emerges from some English sources, for example from ASK (which involves Tom Stinson of Bradford University and Mike Thorne), Ladybird / Longmans and Collins, all of whom are bringing pre-school programs this year. If they feel that the very young must have computers.

Means and ends

Paul Higham on producing good software

In the last few years the teaching of computing in both schools and colleges has increased dramatically. The result of this is that more and more people are becoming involved with software and its associated problems.

There is a danger, however, that students are being taught to program without any instruction in producing good software. I do not include the difficulties in learning the syntax of a particular language, whether it is a low level language or a high level language such as BASIC or PASCAL. This can be overcome by good instruction, books, and above all practice.

Students learning a programming language, in a few years time, might be those involved in the production of software for a small business or, even, a large project such as a military radar system. It is essential that they are given an insight into the problems of

writing large programs and suggestions as to how problems can be avoided.

Students themselves usually only write relatively small programs, maybe one or two hundred lines. If they are very motivated, large systems, such as a communication system might be of the order of 50-500 thousand lines and methods of producing small programs cannot be expanded to cope with large ones. The whole area of software production and testing needs to be studied. Understanding problems associated with large programs will help the student to create better programs of his own.

In today's projects, whether a business system, military system or communication system, software costs are a major part of the total development costs, in the region of 80 per cent. This means that if things go wrong in the software area (and they usually do)

Explore Maths with your Micro: a book for kids aged 9 to 90

DAVID JOHNSON

This book can be started as soon as you have unpacked your micro - it will teach you to program while introducing you to the patterns and products of real numbers. It has been written for the Sinclair Spectrum and ZX81, but can also be used by owners of most other micros. The 28 Activities cover topics from counting in threes to square roots, and from plotting points and drawing pictures to finding the perfect number in future centuries.

June 80pp 11mp £3.95

Software for O-level Maths

Linear Programming

INDEPENDENT SCHOOLS' MICROELECTRONICS CENTRE

This program allows a problem in linear programming involving up to five inequalities to be investigated in detail. The computer draws the diagram, and will display the value of the chosen value function at any point identified by the moveable cursor. A high degree of accuracy may be obtained by adjusting the axes to "zoom in" on a part of the graph.

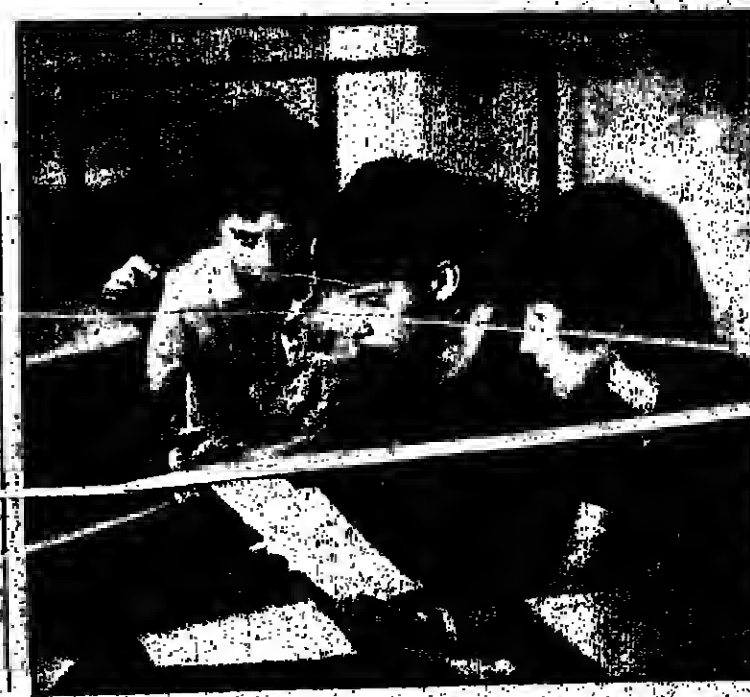
June Disk for BBC Micro £12.00 + VAT

Plotting Graphs

INDEPENDENT SCHOOLS' MICROELECTRONICS CENTRE

This package demonstrates how to draw the graph of an equation by constructing a table of values; the solution of simultaneous equations; and the more general relationship between equations and their graphs, in both Cartesian and polar co-ordinates. Additional graphs may be superimposed on the original functions, and the axes may be altered to enlarge the area studied, or to "zoom in" on a particular portion of the diagram.

June Disk for BBC Micro £12.00 + VAT



ACME COMPUTER SOFTWARE

GONE AWAY

If you have been buying educational software for a few years now, you'll have noticed how many of the companies that appeared in the early years of micros have just as quickly disappeared. There is however, one software company which began in a small way three years ago but has since then grown and developed until its 1983 catalogue has 16 pages containing over 80 programs. With software by such prestigious authors as Russell Wille, Bill Tall and Graham Davies; and with such excellent peripherals as The Cambridge Graphical Table and the Edinburgh Turtle, the new ESM catalogue is proof we're one company that won't be doing a disappearing act.

esm

Write for a copy of the new ESM catalogue:
ESM 1 Duke Street, Wlebech, Cambs PE13 2AE

TEACHER ORIENTED SOFTWARE

CAL: CML (in 31K); administration, mark analysis, staff cover, pupil records etc. 3802 or BBC.

For details send a.s.p. to:
ESM 1, Duke Street, Wlebech, Cambs PE13 2AE.

need

an extensive list of
the programs are
by comprehensive

RESEARCH MACHINES LTD, 185 St. Oxford OX2 0BA, ENGLAND

NOI NERIAMO

WOLVERHAMPTON BOROUGH COUNCIL
EDUCATION COMMITTEE
Required for September
1983
FARFIELD SCHOOL
ENGLISH SCALE 1

This is an 11 - 18 m comprehensive offering wide scope studies to GCSE 'O' level 'A' level courses.

Applications forms available from The Diocese of Exeter Education Department, 6 Centre, St. Peter's Church, Exeter, Devon, to whom they should be returned within 14 days of the advertisement (closing).

Wolverhampton has equal opportunity policy and vacancies are advertised in newspapers and registered

Posts of Responsibility

CHARLTONMANOR (1)
Chilton Road, Chilton SE7
Tel: 01 456 6525
Roll: 189 + 510pursury
Headmaster: Miss B. E. Brink
Requires an experienced an-
dastic class teacher to co-ordi-
nate development of mathematics in
the school 15cale 21.

ST PATRICK'S RC UM & JI
Dundee St. Whipping El 99P
Tel: 01-404 9911
Headmaster: K. O'Crue
Required from September 1981
Science teacher with an inno-
vative/creative attitude, a teacher
who will be able to retain and
growing interest in Science and
teach. Applicants should be
Catholic. Re-advertisement.

NURSERY

REALITY HEADS

ST. IONAROS (IN)
47 Brimley Square, WCIN
Tel: 01-437 1039
Headteacher: Mrs Yvonne Tu

Experienced Nursery teacher
wanted for post of Deputy in
from leader, interested in
development, who will ap-
preciate environmental art and
and sustains and develops a
relationship with parents.

Scale 1 Post

ST AGNES' RC JUN I & II
Rainbow Way, Bury, LANC.
Tel: 01256 5376
Headmaster: P. O. Carr
Required: Assoc. Cathol
Teacher, Scale 1.

EDUCATION

BOARDING SCHOOL

GRACISTOW (ESN) (S)
34 Clampton Park Drive
Brookline, Mass 02110 (JRG)
Tel: 643-62123
Roll: NJ
Headmaster: Mrs E. M. Orr
1) Required asap. Scale 25%
develop. returned. admission
for the 16-19 years old per
normal boarding school for
severe learning difficulties.
most additional duties for
visual potential.

2) Supply teacher. Scale 1.
maintain general teaching
absence of teachers.

DAY SCHOOL

Headmaster: A. U. Andrews
Required From September

Scale 1 & SSA for one & a half
coordinator of Senior China
be responsible for Senior
year olds - to participate
Programme

LANEDOWNE (M)
Angeli Close, Dulley Rd
Tel: 01-737 3713
Roll: 110

All-age school for children
with Moderate Learning C
Headmistress: Miss B. J. R
Recruited from Sepitua
Teacher, Scale 1 & SSA
Economics, to work as part
senior pupils, Visit comm

NORTHAMPTONSHIRE

NORTHAMPTONSHIRE

WELLINGBOROUGH
JOHN LEA SCHOOL
Boddington Road,
Wellingborough, Northants
NN21 2AN.

Required for December.
Teacher of Humanities
(Grade 1). The postholder
must be a qualified
teacher capable of
undertaking the subject
throughout the year and
ability range in the
school. The postholder
will manage a class of
12-14 pupils, with some
special needs. The post
is full time, 37.5 hours
per week. Initially the
teacher will be required
to undertake a year
trial period of appointment.

For postholder applications
should contact the Head-
master, Mr. J. H. H. H. H.

WEST SUSSEX

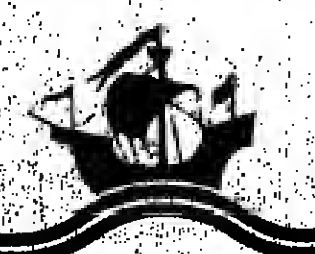
Teacher of Humanities. Ability to offer one or more courses in U.S. History, R.E., and Oceanography would be an advantage.
Form and details from
Headmaster at school on receipt of foolscap 8 1/2 x 11
(064801) 13322

available from The Director of Education, Education Department, 1111 Centre St. Boston, 18, Massachusetts 02111, to whom they should be returned within 14 days of the advertisement. (S.A. please).

Newton Abbot, TQ12

ol for Boys
Plymouth, PL1 5QP.

Some History
1983 to teach all ages from 11 to
elimination work in both subjects.
1983.



SECONDARY SCIENCE

continued

WARWICKSHIRE

POLSWORTH SCHOOL
Oxford Road, Dordon,
Warwickshire, CV35 9JY
Tel: 0454 611111

Science, Biology and Chemistry. Further details and application forms available from the Headmaster, 104422.

WARWICKSHIRE

OUNESBOROUGH SCHOOL FOR BOYS
Ablewell Road, Rugby, CV21 3JY
Tel: 01827 671111

112. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847. 848. 849. 850. 851. 852. 853. 854. 855. 856. 857. 858. 859. 860. 861. 862. 863. 864. 865. 866. 867. 868. 869. 870. 871. 872. 873. 874. 875. 876. 877. 878. 879. 880. 881. 882. 883. 884. 885. 886. 887. 888. 889. 890. 891. 892. 893. 894. 895. 896. 897. 898. 899. 900. 901. 902. 903. 904. 905. 906. 907. 908. 909. 910. 911. 912. 913. 914. 915. 916. 917. 918. 919. 920. 921. 922. 923. 924. 925. 926. 927. 928. 929. 930. 931. 932. 933. 934. 935. 936. 937. 938. 939. 940. 941. 942. 943. 944. 945. 946. 947. 948. 949. 950. 951. 952. 953. 954. 955. 956. 957. 958. 959. 960. 961. 962. 963. 964. 965. 966. 967. 968. 969. 970. 971. 972. 973. 974. 975. 976. 977. 978. 979. 980. 981. 982. 983. 984. 985. 986. 987. 988. 989. 990. 991. 992. 993. 994. 995. 996. 997. 998. 999. 1000. 1001. 1002. 1003. 1004. 1005. 1006. 1007. 1008. 1009. 1010. 1011. 1012. 1013. 1014. 1015. 1016. 1017. 1018. 1019. 1020. 1021. 1022. 1023. 1024. 1025. 1026. 1027. 1028. 1029. 1030. 1031. 1032. 1033. 1034. 1035. 1036. 1037. 1038. 1039. 1040. 1041. 1042. 1043. 1044. 1045. 1046. 1047. 1048. 1049. 1050. 1051. 1052. 1053. 1054. 1055. 1056. 1057. 1058. 1059. 1060. 1061. 1062. 1063. 1064. 1065. 1066. 1067. 1068. 1069. 1070. 1071. 1072. 1073. 1074. 1075. 1076. 1077. 1078. 1079. 1080. 1081. 1082. 1083. 1084. 1085. 1086. 1087. 1088. 1089. 1090. 1091. 1092. 1093. 1094. 1095. 1096. 1097. 1098. 1099. 1100. 1101. 1102. 1103. 1104. 1105. 1106. 1107. 1108. 1109. 1110. 1111. 1112. 1113. 1114. 1115. 1116. 1117. 1118. 1119. 1120. 1121. 1122. 1123. 1124. 1125. 1126. 1127. 1128. 1129. 1130. 1131. 1132. 1133. 1134. 1135. 1136. 1137. 1138. 1139. 1140. 1141. 1142. 1143. 1144. 1145. 1146. 1147. 1148. 1149. 1150. 1151. 1152. 1153. 1154. 1155. 1156. 1157. 1158. 1159. 1160. 1161. 1162. 1163. 1164. 1165. 1166. 1167. 1168. 1169. 1170. 1171. 1172. 1173. 1174. 1175. 1176. 1177. 1178. 1179. 1180. 1181. 1182. 1183. 1184. 1185. 1186. 1187. 1188. 1189. 1190. 1191. 1192. 1193. 1194. 1195. 1196. 1197. 1198. 1199. 1200. 1201. 1202. 1203. 1204. 1205. 1206. 1207. 1208. 1209. 1210. 1211. 1212. 1213. 1214. 1215. 1216. 1217. 1218. 1219. 1220. 1221. 1222. 1223. 1224. 1225. 1226. 1227. 1228. 1229. 1230. 1231. 1232. 1233. 1234. 1235. 1236. 1237. 1238. 1239. 1240. 1241. 1242. 1243. 1244. 1245. 1246. 1247. 1248. 1249. 1250. 1251. 1252. 1253. 1254. 1255. 1256. 1257. 1258. 1259. 1260. 1261. 1262. 1263. 1264. 1265. 1266. 1267. 1268. 1269. 1270. 1271. 1272. 1273. 1274. 1275. 1276. 1277. 1278. 1279. 1280. 1281. 1282. 1283. 1284. 1285. 1286. 1287. 1288. 1289. 1290. 1291. 1292. 1293. 1294. 1295. 1296. 1297. 1298. 1299. 1300. 1301. 1302. 1303. 1304. 1305. 1306. 1307. 1308. 1309. 1310. 1311. 1312. 1313. 1314. 1315. 1316. 1317. 1318. 1319. 1320. 1321. 1322. 1323. 1324. 1325. 1326. 1327. 1328. 1329. 1330. 1331. 1332. 1333. 1334. 1335. 1336. 1337. 1338. 1339. 1340. 1341. 1342. 1343. 1344. 1345. 1346. 1347. 1348. 1349. 1350. 1351. 1352. 1353. 1354. 1355. 1356. 1357. 1358. 1359. 1360. 1361. 1362. 1363. 1364. 1365. 1366. 1367. 1368. 1369. 1370. 1371. 1372. 1373. 1374. 1375. 1376. 1377. 1378. 1379. 1380. 1381. 1382. 1383. 1384. 1385. 1386. 1387. 1388. 1389. 1390. 1391. 1392. 1393. 1394. 1395. 1396. 1397. 1398. 1399. 1400. 1401. 1402. 1403. 1404. 1405. 1406. 1407. 1408. 1409. 1410. 1411. 1412. 1413. 1414. 1415. 1416. 1417. 1418. 1419. 1420. 1421. 1422. 1423. 1424. 1425. 1426. 1427. 1428. 1429. 1430. 1431. 1432. 1433. 1434. 1435. 1436. 1437. 1438. 1439. 1440. 1441. 1442. 1443. 1444. 1445. 1446. 1447. 1448. 1449. 1450. 1451. 1452. 1453. 1454. 1455. 1456. 1457. 1458. 1459. 1460. 1461. 1462. 1463. 1464. 1465. 1466. 1467. 1468. 1469. 1470. 1471. 1472. 1473. 1474. 1475. 1476. 1477. 1478. 1479. 1480. 1481. 1482. 1483. 1484. 1485. 1486. 1487. 1488. 1489. 1490. 1491. 1492. 1493. 1494. 1495. 1496. 1497. 1498. 1499. 1500. 1501. 1502. 1503. 1504. 1505. 1506. 1507. 1508. 1509. 1510. 1511. 1512. 1513. 1514. 1515. 1516. 1517. 1518. 1519. 1520. 1521. 1522. 1523. 1524. 1525. 1526. 1527. 1528. 1529. 1530. 1531. 1532. 1533. 1534. 1535. 1536. 1537. 1538. 1539. 1540. 1541. 1542. 1543. 1544. 1545. 1546. 1547. 1548. 1549. 1550. 1551. 1552. 1553. 1554. 1555. 1556. 1557. 1558. 1559. 1560. 1561. 1562. 1563. 1564. 1565. 1566. 1567. 1568. 1569. 1570. 1571. 1572. 1573. 1574. 1575. 1576. 1577. 1578. 1579. 1580. 1581. 1582. 1583. 1584. 1585. 1586. 1587. 1588. 1589. 1590. 1591. 1592. 1593. 1594. 1595. 1596. 1597. 1598. 1599. 1600. 1601. 1602. 1603. 1604. 1605. 1606. 1607. 1608. 1609. 1610. 1611. 1612. 1613. 1614. 1615. 1616. 1617. 1618. 1619. 1620. 1621. 1622. 1623. 1624. 1625. 1626. 1627. 1628. 1629. 1630. 1631. 1632. 1633. 1634. 1635. 1636. 1637. 1638. 1639. 1640. 1641. 1642. 1643. 1644. 1645. 1646. 1647. 1648. 1649. 1650. 1651. 1652. 1653. 1654. 1655. 1656. 1657. 1658. 1659. 1660. 1661. 1662. 1663. 1664. 1665. 1666. 1667. 1668. 1669. 1670. 1671. 1672. 1673. 1674. 1675. 1676. 1677. 1678. 1679. 1680. 1681. 1682. 1683. 1684. 1685. 1686. 1687. 1688. 1689. 1690. 1691. 1692. 1693. 1694. 1695. 1696. 1697. 1698. 1699. 1700. 1701. 1702. 1703. 1704. 1705. 1706. 1707. 1708. 1709. 1710. 1711. 1712. 1713. 1714. 1715. 1716. 1717. 1718. 1719. 1720. 1721. 1722. 1723. 1724. 1725. 1726. 1727. 1728. 1729. 1730. 1731. 1732. 1733. 1734. 1735. 1736. 1737. 1738. 1739. 1740. 1741. 1742. 1743. 1744. 1745. 1746. 1747. 1748. 1749. 1750. 1751. 1752. 1753. 1754. 1755. 1756. 1757. 1758. 1759. 1760. 1761. 1762. 1763. 1764. 1765. 1766. 1767. 1768. 1769. 1770. 1771. 1772. 1773. 1774. 1775. 1776. 1777. 1778. 1779. 1780. 1781. 1782. 1783. 1784. 1785. 1786. 1787. 1788. 1789. 1790. 1791. 1792. 1793. 1794. 1795. 1796. 1797. 1798. 1799. 1800. 1801. 1802. 1803. 1804. 1805. 1806. 1807. 1808. 1809. 1810. 1811. 1812. 1813. 1814. 1815. 1816. 1817. 1818. 1819. 1820. 1821. 1822. 1823. 1824. 1825. 1826. 1827. 1828. 1829. 1830. 1831. 1832. 1833. 1834. 1835. 1836. 1837. 1838. 1839. 1840. 1841. 1842. 1843. 1844. 1845. 1846. 1847. 1848. 1849. 1850. 1851. 1852. 1853. 1854. 1855. 1856. 1857. 1858. 1859. 1860. 1861. 1862. 1863. 1864. 1865. 1866. 1867. 1868. 1869. 1870. 1871. 1872. 1873. 1874. 1875. 1876. 1877. 1878. 1879. 1880. 1881. 1882. 1883. 1884. 1885. 1886. 1887. 1888. 1889. 1890. 1891. 1892. 1893. 1894. 1895. 1896. 1897. 1898. 1899. 1900. 1901. 1902. 1903. 1904. 1905. 1906. 1907. 1908. 1909. 1910. 1911. 1912. 1913. 1914. 1915. 1916. 1917. 1918. 1919. 1920. 1921. 1922. 1923. 1924. 1925. 1926. 1927. 1928. 1929. 1930. 1931. 1932. 1933. 1934. 1935. 1936. 1937. 1938. 1939. 1940. 1941. 1942. 1943. 1944. 1945. 1946. 1947. 1948. 1949. 1950. 1951. 1952. 1953. 1954. 1955. 1956. 1957. 1958. 1959. 1960. 1961. 1962. 1963. 1964. 1965. 1966. 1967. 1968. 1969. 1970. 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990. 1991. 1992. 1993. 1994. 1995. 1996. 1997. 1998. 1999. 2000. 2001. 2002. 2003. 2004. 2005. 2006. 2007. 2008. 2009. 2010. 2011. 2012. 2013. 2014. 2015. 2016. 2017. 2018. 2019. 2020. 2021. 2022. 2023. 2024. 2025. 2026. 2027. 2028. 2029. 2030. 2031. 2032. 2033. 2034. 2035. 2036. 2037. 2038. 2039. 2040. 2041. 2042. 2043. 2044. 2045. 2046. 2047. 2048. 2049. 2050. 2051. 2052. 2053. 2054. 2055. 2056. 2057. 2058. 2059. 2060. 2061. 2062. 2063. 2064. 2065. 2066. 2067. 2068. 2069. 2070. 2071. 2072. 2073. 2074. 2075. 2076. 2077. 2078. 2079. 2080. 2081. 2082. 2083. 2084. 2085. 2086. 2087. 2088. 2089. 2090. 2091. 2092. 2093. 2094. 2095. 2096. 2097. 2098. 2099. 2100. 2101. 2102. 2103. 2104. 2105. 2106. 2107. 2108. 2109. 2110. 2111. 2112. 2113. 2114. 2115. 2116. 2117. 2118. 2119. 2120. 2121. 2122. 2123. 2124. 2125. 2126. 2127. 2128. 2129. 2130. 2131. 2132. 2133. 2134. 2135. 2136. 2137. 2138. 2139. 2140. 2141. 2142. 2143. 2144. 2145. 2146. 2147. 2148. 2149. 2150. 2151. 2152. 2153. 2154. 2155. 2156. 2157. 2158. 2159. 2160. 2161. 2162. 2163. 2164. 2165. 2166. 2167. 2168. 2169. 2170. 2171. 2172. 2173. 2174. 2175. 2176. 2177. 2178. 2179. 2180. 2181. 2182. 2183. 2184.

Further details and application form available from the Personnel Unit (5/61/NCF), The Sports Council, 16 Upper Woburn Place, London WC1N 1PP.
Closing date: 13 June 1983.

PERSONAL

YOUNG GERMAN MAN, aged 19, seeks English family (preferably including teacher or student) to live with for one month from August and receive tuition in English. For details, write to: The Times Educational Supplement, 100, Strand, London WC2R 0AH. Tel: 01-498 8500.

YOUR PEN CAN PAY FOR YOUR HOLIDAY this year and all the holiday to come. It once you learn to write you learn to make money. The L3 method of individual coaching by correspondence brings success while you learn. For free book write to: The London School of Journalism, 7, E.S. 18, Bedford Street, London W1. 01-498 8500. 100000

WOMEN TEACHERS: Are you working in your stress? Are you tired? A Women's Guide to self-employment. A practical fact pack for 25.00. Write to: The London School of Journalism, 7, E.S. 18, Bedford Street, London W1. 01-498 8500. 100000

WRITE and sell Children's stories to the major publishers. Free booklet. Write to: The London School of Journalism, 7, E.S. 18, Bedford Street, London W1. 01-498 8500. 100000

For Sale and Wanted

THE SADDLER, ETC. Expertly produced at reasonable prices. Established many years. O. & P. known all over Britain by email. Write to: The Saddler, Etc., 100, Strand, London WC2R 0AH. Tel: 01-498 8500. 100000

TIME-TRAVELLING ON A 302 can save time and improve your writing. For details, write to: The London School of Journalism, 7, E.S. 18, Bedford Street, London W1. 01-498 8500. 100000

FOR SALE Several high quality second-hand organs. 398. 1000. 1500. 2500. 3500. 4500. 5500. 6500. 7500. 8500. 9500. 10000. 11000. 12000. 13000. 14000. 15000. 16000. 17000. 18000. 19000. 20000. 21000. 22000. 23000. 24000. 25000. 26000. 27000. 28000. 29000. 30000. 31000. 32000. 33000. 34000. 35000. 36000. 37000. 38000. 39000. 40000. 41000. 42000. 43000. 44000. 45000. 46000. 47000. 48000. 49000. 50000. 51000. 52000. 53000. 54000. 55000. 56000. 57000. 58000. 59000. 60000. 61000. 62000. 63000. 64000. 65000. 66000. 67000. 68000. 69000. 70000. 71000. 72000. 73000. 74000. 75000. 76000. 77000. 78000. 79000. 80000. 81000. 82000. 83000. 84000. 85000. 86000. 87000. 88000. 89000. 90000. 91000. 92000. 93000. 94000. 95000. 96000. 97000. 98000. 99000. 100000. 101000. 102000. 103000. 104000. 105000. 106000. 107000. 108000. 109000. 110000. 111000. 112000. 113000. 114000. 115000. 116000. 117000. 118000. 119000. 120000. 121000. 122000. 123000. 124000. 125000. 126000. 127000. 128000. 129000. 130000. 131000. 132000. 133000. 134000. 135000. 136000. 137000. 138000. 139000. 140000. 141000. 142000. 143000. 144000. 145000. 146000. 147000. 148000. 149000. 150000. 151000. 152000. 153000. 154000. 155000. 156000. 157000. 158000. 159000. 160000. 161000. 162000. 163000. 164000. 165000. 166000. 167000. 168000. 169000. 170000. 171000. 172000. 173000. 174000. 175000. 176000. 177000. 178000. 179000. 180000. 181000. 182000. 183000. 184000. 185000. 186000. 187000. 188000. 189000. 190000. 191000. 192000. 193000. 194000. 195000. 196000. 197000. 198000. 199000. 200000. 201000. 202000. 203000. 204000. 205000. 206000. 207000. 208000. 209000. 210000. 211000. 212000. 213000. 214000. 215000. 216000. 217000. 218000. 219000. 220000. 221000. 222000. 223000. 224000. 225000. 226000. 227000. 228000. 229000. 230000. 231000. 232000. 233000. 234000. 235000. 236000. 237000. 238000. 239000. 240000. 241000. 242000. 243000. 244000. 245000. 246000. 247000. 248000. 249000. 250000. 251000. 252000. 253000. 254000. 255000. 256000. 257000. 258000. 259000. 260000. 261000. 262000. 263000. 264000. 265000. 266000. 267000. 268000. 269000. 270000. 271000. 272000. 273000. 274000. 275000. 276000. 277000. 278000. 279000. 280000. 281000. 282000. 283000. 284000. 285000. 286000. 287000. 288000. 289000. 290000. 291000. 292000. 293000. 294000. 295000. 296000. 297000. 298000. 299000. 300000. 301000. 302000. 303000. 304000. 305000. 306000. 307000. 308000. 309000. 310000. 311000. 312000. 313000. 314000. 315000. 316000. 317000. 318000. 319000. 320000. 321000. 322000. 323000. 324000. 325000. 326000. 327000. 328000. 329000. 330000. 331000. 332000. 333000. 334000. 335000. 336000. 337000. 338000. 339000. 340000. 341000. 342000. 343000. 344000. 345000. 346000. 347000. 348000. 349000. 350000. 351000. 352000. 353000. 354000. 355000. 356000. 357000. 358000. 359000. 360000. 361000. 362000. 363000. 364000. 365000. 366000. 367000. 368000. 369000. 370000. 371000. 372000. 373000. 374000. 375000. 376000. 377000. 378000. 379000. 380000. 381000. 382000. 383000. 384000. 385000. 386000. 387000. 388000. 389000. 390000. 391000. 392000. 393000. 394000. 395000. 396000. 397000. 398000. 399000. 400000. 401000. 402000. 403000. 404000. 405000. 406000. 407000. 408000. 409000. 410000. 411000. 412000. 413000. 414000. 415000. 416000. 417000. 418000. 419000. 420000. 421000. 422000. 423000. 424000. 425000. 426000. 427000. 428000. 429000. 430000. 431000. 432000. 433000. 434000. 435000. 436000. 437000. 438000. 439000. 440000. 441000. 442000. 443000. 444000. 445000. 446000. 447000. 448000. 449000. 450000. 451000. 452000. 453000. 454000. 455000. 456000. 457000. 458000. 459000. 460000. 461000. 462000. 463000. 464000. 465000. 466000. 467000. 468000. 469000. 470000. 471000. 472000. 473000. 474000. 475000. 476000. 477000. 478000. 479000. 480000. 481000. 482000. 483000. 484000. 485000. 486000. 487000. 488000. 489000. 490000. 491000. 492000. 493000. 494000. 495000. 496000. 497000. 498000. 499000. 500000. 501000. 502000. 503000. 504000. 505000. 506000. 507000. 508000. 509000. 510000. 511000. 512000. 513000. 514000. 515000. 516000. 517000. 518000. 519000. 520000. 521000. 522000. 523000. 524000. 525000. 526000. 527000. 528000. 529000. 530000. 531000. 532000. 533000. 534000. 535000. 536000. 537000. 538000. 539000. 540000. 541000. 542000. 543000. 544000. 545000. 546000. 547000. 548000. 549000. 550000. 551000. 552000. 553000. 554000. 555000. 556000. 557000. 558000. 559000. 560000. 561000. 562000. 563000. 564000. 565000. 566000. 567000. 568000. 569000. 570000. 571000. 572000. 573000. 574000. 575000. 576000. 577000. 578000. 579000. 580000. 581000. 582000. 583000. 584000. 585000. 586000. 587000. 588000. 589000. 590000. 591000. 592000. 593000. 594000. 595000. 596000. 597000. 598000. 599000. 600000. 601000. 602000. 603000. 604000. 605000. 606000. 607000. 608000. 609000. 610000. 611000. 612000. 613000. 614000. 615000. 616000. 617000. 618000. 619000. 620000. 621000. 622000. 623000. 624000. 625000. 626000. 627000. 628000. 629000. 630000. 631000. 632000. 633000. 634000. 635000. 636000. 637000. 638000. 639000. 640000. 641000. 642000. 643000. 644000. 645000. 646000. 647000. 648000. 649000. 650000. 651000. 652000. 653000. 654000. 655000. 656000. 657000. 658000. 659000. 660000. 661000. 662000. 663000. 664000. 665000. 666000. 667000. 668000. 669000. 670000. 671000. 672000. 673000. 674000. 675000. 676000. 677000. 678000. 679000. 680000. 681000. 682000. 683000. 684000. 685000. 686000. 687000. 688000. 689000. 690000. 691000. 692000. 693000. 694000. 695000. 696000. 697000. 698000. 699000. 700000. 701000. 702000. 703000. 704000. 705000. 706000. 707000. 708000. 709000. 710000. 711000. 712000. 713000. 714000. 715000. 716000. 717000. 718000. 719000. 720000. 721000. 722000. 723000. 724000. 725000. 726000. 727000. 728000. 729000. 730000. 731000. 732000. 733000. 734000. 735000. 736000. 737000. 738000. 739000. 740000. 741000. 742000. 743000. 744000. 745000. 746000. 747000. 748000. 749000. 750000. 751000. 752000. 753000. 754000. 755000. 756000. 757000. 758000. 759000. 760000. 761000. 762000. 763000. 764000. 765000. 766000. 767000. 768000. 769000. 770000. 771000. 772000. 773000. 774000. 775000. 776000. 777000. 778000. 779000. 780000. 781000. 782000. 783000. 784000. 785000. 786000. 787000. 788000. 789000. 790000. 791000. 792000. 793000. 794000. 795000. 796000. 797000. 798000. 799000. 800000. 801000. 802000. 803000. 804000. 805000. 806000. 807000. 808000. 809000. 810000. 811000. 812000. 813000. 814000. 815000. 816000. 817000. 818000. 819000. 820000. 821000. 822000. 823000. 824000. 825000. 826000. 827000. 828000. 829000. 830000. 831000. 832000. 833000. 834000. 835000. 836000. 837000. 838000. 839000. 840000. 841000. 842000. 843000. 844000. 845000. 846000. 847000. 848000. 849000. 850000. 851000. 852000. 853000. 854000. 855000. 856000. 857000. 858000. 859000. 860000. 861000. 862000. 863000. 864000. 865000. 866000. 867000. 868000. 869000. 870000. 871000. 872000. 873000. 874000. 875000. 876000. 877000. 878000. 879000. 880000. 881000. 882000. 883000. 884000. 885000. 886000. 887000. 888000. 889000. 890000. 891000. 892000. 893000. 894000. 895000. 896000. 897000. 898000. 899000. 900000. 901000. 902000. 903000. 904000. 905000. 906000. 907000. 908000. 909000. 910000. 911000. 912000. 913000. 914000. 915000. 916000. 917000. 918000. 919000. 920000. 921000. 922000. 923000. 924000. 925000. 926000. 927000. 928000. 929000. 930000. 931000. 932000. 933000. 934000. 935000. 936000. 937000. 938000. 939000. 940000. 941000. 942000. 943000. 944000. 945000. 946000. 947000. 948000. 949000. 950000. 951000. 952000. 953000. 954000. 955000. 956000. 957000. 958000. 959000. 960000. 961000. 962000. 963000. 964000. 965000. 966000. 967000. 968000. 969000. 970000. 971000. 972000. 973000. 974000. 975000. 976000. 977000. 978000. 979000. 980000. 981000. 982000. 983000. 984000. 985000. 986000. 987000. 988000. 989000. 990000. 991000. 992000. 993000. 994000. 995000. 996000. 997000. 998000. 999000. 1000000. 1001000. 1002000. 1003000. 1004000. 1005000. 1006000. 1007000. 1008000. 1009000. 1010000. 1011000. 1012000. 1013000. 1014000. 1015000. 1016000. 1017000. 1018000. 1019000. 1020000. 1021000. 1022000. 1023000. 1024000. 1025000. 1026000. 1027000. 1028000. 1029000. 1030000. 1031000. 1032000. 1033000. 1034000. 1035000. 1036000. 1037000. 1038000. 1039000. 1040000. 1041000. 1042000. 1043000. 1044000. 1045000. 1046000. 1047000. 1048000. 1049000. 1050000. 1051000. 1052000. 1053000. 1054000. 1055000. 1056000. 1057000. 1058000. 1059000. 1060000. 1061000. 1062000. 1063000. 1064000. 1065000. 1066000. 1067000. 1068000. 1069000. 1070000. 1071000. 1072000. 1073000. 1074000. 1075000. 1076000. 1077000. 1078000. 1079000. 1080000. 1081000. 1082000. 1083000. 1084000. 1085000. 1086000. 1087000. 1088000. 1089000. 1090000. 1091000. 1092000. 1093000. 1094000. 1095000. 1096000. 1097000. 1098000. 1099000. 1100000. 1101000. 1102000. 1103000. 1104000. 1105000. 1106000. 1107000. 1108000. 1109000. 1110000. 1111000. 1112000. 1113000. 1114000. 1115000. 1116000. 1117000. 1118000. 1119000. 1120000. 1121000. 1122000. 1123000. 1124000. 1125000. 1126000. 1127000. 1128000. 1129000. 1130000. 1131000. 1132000. 1133000. 1134000. 1135000. 1136000. 1137000. 1138000. 1139000. 1140000. 1141000. 1142000. 1143000. 1144000. 1145000. 1146000. 1147000. 1148000. 1149000. 1150000. 1151000. 1152000. 1153000. 1154000. 1155000. 1156000. 1157000. 1158000. 1159000. 1160000. 1161000. 1162000. 1163000. 1164000. 1165000. 1166000. 1167000. 1168000. 1169000. 1170000. 1171000. 1172000. 1173000. 1174000. 1175000. 1176000. 1177000. 1178000. 1179000. 1180000. 1181000. 1182000. 1183000. 1184000. 1185000. 1186000. 1187000. 1188000. 1189000. 1190000. 1191000. 1192000. 1193000. 1194000. 1195000. 1196000. 1197000. 1198000. 1199000. 1200000. 1201000. 1202000. 1203000. 1204000. 1205000. 1206000. 1207000. 1208000. 1209000. 1210000. 1211000. 1212000. 1213000. 1214000. 1215000. 1216000. 1217000. 1218000. 1219000. 1220000. 1221000. 1222000. 1223000. 1224000. 1225000. 1226000. 1227000. 1228000. 1229000. 1230000. 1231000. 1232000. 1233000. 1234000. 1235000. 1236000. 1237000. 1238000. 1239000. 1240000. 1241000. 1242000. 1243000. 1244000. 1245000. 1246000. 1247000. 1248000. 1249000. 1250000. 1251000. 1252000. 1253000. 1254000. 1255000. 1256000. 1257000. 1258000. 1259000. 1260000. 1261000. 1262000. 1263000. 1264000. 1265000. 1266000. 1267000. 1268000. 1269000. 1270000. 1271000. 1272000. 1273000. 1274000. 1275000. 1276000. 1277000. 1278000. 1279000. 1280000. 1281000. 1282000. 1283000. 1284000. 1285000. 1286000. 1287000. 1288000. 1289000. 1290000. 1291000. 1292000. 1293000. 1294000. 1295000. 1296000. 1297000. 1298000. 1299000. 1300000. 1301000. 1302000. 1303000. 1304000. 1305000. 1306000. 1307000. 1308000. 1309000. 1310000. 1311000. 1312000. 1313000. 1314000. 1315000. 1316000. 1317000. 1318000. 1319000. 1320000. 1321000. 1322000. 1323000. 1324000. 1325000. 1326000. 1327000. 1328000. 1329000. 1330000. 1331000. 1332000. 1333000. 1334000. 1335000. 1336000. 1337000. 1338000. 1339000. 1340000. 1341000. 1342000. 1343000. 1344000. 1345000. 1346000. 1347000. 1348000. 1349000. 1350000. 1351000. 1352000. 1353000. 1354000. 1355000. 1356000. 1357000. 1358000. 1359000. 1360000. 1361000. 1362000. 1363000. 1364000. 1365000. 1366000. 1367000. 1368000. 1369000. 1370000. 1371000. 1372000. 1373000. 1374000. 1375000. 1376000. 1377000. 1378000. 1379000. 1380000. 1381000. 1382000. 1383000. 1384000. 1385000. 1386000. 1387000. 1388000. 1389000. 1390000. 1391000. 1392000. 1393000. 1394000. 1395000. 13960